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THE MAGAZINE

OF

HORTICULTURE,

BOTANY,

AND ALL USEFUL DISCOVERIES AND IMPROVEMENTS IN

RURAL AFFAIRS.

> " Je voudrais échauffer tout l'univers de mon gout pour les jardins. Il me semble qu'il est impossible qu'un méchant puisse l'avoir. Il n'est point de vertus que je ne suppose à celui que aime à parler et à faire des jardins. Péres de famille, inspirez a jardinomanie à vos enfans."—*Prince De Ligne.*

VOL. XX.,
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(VOL. X., NEW SERIES.)

EDITED BY C. M. HOVEY.
AUTHOR OF THE "FRUITS OF AMERICA."

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PREFACE.

THE present Volume completes the SECOND SERIES of the Magazine, and the Twentieth of the entire work.

With the next volume will commence the THIRD SERIES. This plan is adopted for the convenience of new subscribers who may not wish to procure the whole work, but, at the same time, possess, a complete series. This arrangement will not, however, interfere at all with the enumeration of the volumes with those of our readers who have taken the Magazine from its commencement.

Our "Social Chat" with our friends, in the December number, relieves us of the necessity of extending our prefatory remarks. The present volume we believe will be found fully equal to any that have preceded, and in some respects much superior. The articles by Mr. W. Flagg add a new lustre to the well-known character of the Magazine.

Boston, *Nov*. 27, 1854.

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THE MAGAZINE
OF
HORTICULTURE.

JANUARY, 1854.

ORIGINAL COMMUNICATIONS.

Art. I. *A Retrospective View of the Progress of Horticulture in the United States, during the year* 1853.

Two very severe or very mild winters rarely succeed each other; that of 1851 and 1852 is known as one of the coldest we have had since 1835, and that of 1852 and 1853 is equally well known as one of the mildest we have had for many years, the thermometer not falling below zero during the season. It was very mild, open and pleasant, up to the middle of February, when the coldest weather was experienced. There was very little frost in the ground, and the season was considerably earlier than usual.

Such a mild winter was very favorable to all kinds of trees. Peaches bore more abundantly the past summer than we have ever known before; pears, too, produced a fine crop; cherries were tolerably abundant, and plums in great quantity; but the latter suffered greatly from the cold rains of August, cracking and rotting upon the trees. Fruits of all kinds were abundant, except apples.

Somewhat contrary, however, to the usual course of our seasons, we have had two exceedingly dry summers in this part of the country. For two years the strawberry crop, in consequence of such severe drought, has not been more than half the average of ordinary years. Scarcely any rain fell from the last of May until the last of July, a period of two months. Such dry weather was very unfavorable to all newly planted trees. The heavy rains of August and September invigorated in a degree their feeble growth, but they came too late to make up for the drought of the earlier part of summer.

January opened with storms of snow, hail and rain, but was succeeded by mild weather, with the temperature at 48°. On the 9th, eight inches of snow fell, On the 13th and on the 17th, the thermometer fell to 4°. Moderate weather continued to the 23d, when a heavy rain carried off nearly all the snow. On the 27th, the temperature was at zero. The last three days of the month were mild and fine.

February continued mild, with rain on the 3d, and a dense fog on the 4th, with the thermometer 45° to 48°. On the 6th, it reached the highest point of the winter, 60°, with a warm rain, and the frost all out of the ground. Mild weather continued to the 12th, when we had four inches of snow. The morning of the 15th was the coldest, the thermometer at zero; in some cold places 2° below. The snow disappeared again with the warm rain of the 16th, and the coolest week of the winter followed, the thermometer ranging from 25° down, the lowest point being 3° on the 20th; on the 23d the temperature reached, for the third time, 48°, and the remainder of the month was mild with light snows.

March commenced with an easterly rain, succeeded by six or eight inches of snow on the 5th. From that date to the 15th it was mild and variable. The 15th was cool again, with the thermometer down to 8°. On the 21st the temperture was 48° at night, carrying off all snow and frost: the remainder of the month continued fine and warm, and favorable to all farming or gardening operations.

April was a fine month. On the 4th there was a heavy rain, with thunder and lightning; the 5th and 6th were also showery; succeeding this, came fine and seasonable weather up to the 14th; it was then cooler, with slight frosts on the 15th and 19th. The 20th was rainy, followed by cool weather, without frost, up to the end of the month. No extremes of heat or cold occurred to endanger the slowly advancing vegetation.

The first day of May the cherries began to open their blossoms, and pear buds were nearly showing color; but the 2d, 3d and 4th were cool, which kept them back. The 8th was showery and warm; and on the 9th, cherries, pears and peaches were in full bloom. On the 14th there was a very light white frost, but not sufficient to do any injury. The 15th, 16th and 19th were very warm, with the thermometer up to 88°; a day or two of cool weather followed, and the 22d and 23d were warm again. The 25th and 26th were accompanied with easterly rain, and the month closed warm, with a temperature of 88° again on the 29th.

A June frost! This rarely happens, but on the morning of the 1st the grass in low places was white and stiff, injuring in some localities tomatoes, beans, and other tender vegetation; quite cool weather succeeded, and on the 10th the thermometer only indicated 40°; very fine, dry and warm weather followed, with a temperature of 93° on the 16th, 93° on the 20th, and 94° on the 21st. The month closed with fair, moderate and dry weather.

The month of July was moderately warm, with very light showers. On the 11th, about half an inch of rain fell, and again on the 19th one and a half inches. On the 26th we had a slight easterly storm. The highest range of the thermometer was 82° on the 22d.

August was cool in the early part, with easterly rains and storms; on the 2d, two to three inches fell, and two and a half more on the 4th. On the 9th it became fine, and a week of oppressive hot weather followed, the temperature being, successively, from the 10th to the 15th, 86°, 95°, 97°, 88°, 95° and 84°. The remainder of the month was cool, with frequent showers. The entire quantity of rain during August was about *ten inches*, being more than twice the average of the month in ordinary years.

September opened warm and fine, with the thermometer at 83° to 89°; but on the 10th it was cool again, with but few fine days, up to the 18th. The following week was warm. On the 26th, the temperature was as low as 36°, and a succession of cool mornings followed, with the mercury at 28° on the 30th, accompanied with a frost severe enough to seriously injure dahlias, and all tender vegetation. This was the earliest frost we have had, with one exception, for ten or twelve years.

The early part of October was cool, with several white frosts; up to the 18th, the temperature advanced but little above the freezing point at sunrise. After that, it was warm, with showers and rain, to the 29th. In sheltered localities the dahlias were at that time in full bloom, a later period than we ever knew them out of the city. Taken as a whole, October was a beautiful month, with less extreme cold than is often experienced.

November was fine and warm until the 8th, when there was a light squall of snow, with the mercury at 20°, and the ground frozen. The 9th was warm, and the 11th cool again. Succeeding this was a heavy easterly rain, and another warm spell on the 19th; the remainder of the month was mostly cloudy and moderately cool, the lowest depression of the temperature being 15° on the 25th.

December, though pleasant and remarkably free from storms, has, up to this time, been cold, with from three to six inches of frost in the ground. The coldest day was on the 8th, with the thermometer at 10°.

A comparison of the above record of the year with that of our previous ones will best show its characteristics, which are somewhat difficult to name. The average temperature of both summer and autumn was lower than those of 1852; but compared with 1851 it was higher. The late fall rains stimulated a new growth, but not to the extent of the previous autumn, when many trees were in full bloom in October.

HORTICULTURE.

The taste for Horticultural pursuits is steadily becoming more extended. Wherever a town or village is settled, even in the remotest sections of our wide country, there may be found neat gardens, filled with the better varieties of our fruits. With so great a range of latitude admirably adapted to their culture, a vast field is open for the introduction of trees, and our rapidly extended railroads carry hence the finest productions of the best filled suburban nurseries. Steam, which is indeed the great promoter of civilization, is equally the great advancer of Horticultural art. The great West, where, a few years since, native seedling apples comprised the principal fruit, now claims only a secondary place in the variety of pears, peaches, cherries, &c., which are cultivated in the older settled cities and towns. Even in Wisconsin and Iowa, the pears exhibited at their Horticultural shows are enumerated by the hundred!

But this simple increase and extension of the products of Horticultural skill is not all that has been done. Aware of the benefits which result from improved specimens of fruit, our cultivators have given their attention to the growth of seedlings, and to the selection of native sorts whenever found; and this attention and observation has enriched our catalogues with some of the choicest kinds which we possess. We no longer look to France and Belgium for our pears, or to England for our strawberries and raspberries; confident that what has already been done, mostly the result of accident, has equalled the combined labors of European Pomologists, we look forward to that period when a catalogue of entirely American fruits will be ample for the most fastidious amateur to select from, however so good may be those we have of exotic growth. A climate and soil so varied as ours need not be dependent upon any other country for its Agricultural or Horticultural products.

The past year has not been noted for any peculiarities in the growth or cultivation of fruits. The special manure question seems to have lost its charm—that of novelty—and we do not hear of the annual experiments of renovated White Doyenné pears by means of bones, iron filings, and similar nostrums. But we do hear of this fine old sort being exhibited in greater perfection than even in its palmiest days, without any other aid than good sound cultivation, such as common sense dictates. Every year brings with it larger and finer fruit, and the successful exhibitors are not fancy cultivators. We do not mean by this that *manures* of any kind, *special* or otherwise, are not beneficial, but that none have yet been discovered which will take the place of the good old fashioned sort,—or its equivalent—guano. Phosphate of lime is now much in vogue, but we wait to see results before we adopt the eulogies of its particular friends regarding its value.

Incidentally, in the early part of our last volume (XIX) we copied some remarks made at the North Western Fruit Growers' Convention, in regard to root-grafting, and subsequently gave our views in relation to its practice. These called forth what we suppose was intended as a reply from a contemporary. There was not one single fact brought forward to refute what we said, but only a string of words and wonderful facetiousness, which we allow to pass for what they are worth. Our views of the system remain unchanged, that is, we consider root-grafting as generally practised—and everybody who knows anything about it knows what that is—an injudicious mode—of *economy* we say nothing—of obtaining good orchard trees.

Some of the best articles that have ever been written on the culture of the Isabella and other hardy grapes, have appeared in our last volume; one by Mr. Gore, (p. 60,) and the other by Mr. Johnston, (p. 176.) Both reside in a cool region of New England, where the summers are not the longest, yet they have produced some of the finest specimens of this fruit. The methods of both gentlemen are different, though leading to the same result; neither of them approving of the close summer-pruning, so generally considered indispensable with the grape, viz., the cutting off all the wood one or two eyes beyond the fruit. Our views on this practice will be found appended to Mr. Gore's article.

No question connected with the culture of fruit trees has been more discussed by writers upon the subject, than the best season for transplanting. The prevalent opinion has been in favor of the spring. But believing, from long experience, that this is not the fact, but that the fall is far preferable, we have advocated the latter season, and given our reasons for the same, at p. 433. We are glad to notice that the article has attracted the attention of our contemporaries, who have copied a portion of our remarks. We trust they may be the means of inducing cultivators to test a question of so much importance.

An account of a new mode of transplanting trees, which has attracted much attention among English cultivators, has been given at p. 224. According to the statement of competent judges, who were present at a trial of the machine used for this purpose, it answers admirably the object of its invention. Large trees were speedily removed without any apparent injury, though we have yet to learn the relative growth or condition of trees transplanted by this process and the ordinary mode, after a period of two or three years. Undoubtedly, in the hands of careful men, the invention is a good one, but it is rather doubtful whether it will ever come into very general use. The cost of the apparatus is considerable, and unless a large number of trees are to be moved, the expense would be too great for the object attained. If some enterprising person were to make the moving of large trees a business, and could find enough to do, it might pay to procure one of Mr. McGlashen's machines. There are many gentlemen who would not value twenty-five or even fifty dollars to have safely removed some favorite, beautiful, or rare tree of large size.

The desire to possess new and superior fruits has created a corresponding desire on the part of enthusiastic cultivators to produce them. Consequently we see our catalogues yearly augmented with new varieties, many of which are only of secondary quality, while a small number are of the highest merit. The Belgians seem to take the lead in new pears, and our own country in other fruits. In our last volume we have given a descriptive list of Dr. Kirtland's new cherries, (p. 166,) and if the opinion of some of our well known pomologists is any evidence, they are likely to prove the greatest additions which have been made to this fine fruit since Mr. Knight produced his seedlings. Many new native pears have been brought to notice through the exertions of the Pennsylvania Horticultural Society, descriptions of which will be found in the detailed reports of its fruit committee already given. Some apparently superior seedling grapes have also been described in the same reports. Our Pomological Gossip of the year contains a brief account of everything worthy of particular note.

Our series of articles describing and figuring all the select pears have been continued in the past volume, and among the varieties enumerated are some of the finest we possess. The year has been a good one for this delicious fruit, and we shall be able to add several other fine ones to the list the coming year. Of the foreign pears which appear of good promise after a single trial, we may name the Beurré Soulange, Beurré Kennes, Beurré Superfine, Beurré Bachelier, Colmar de Silly, De Bavay, Long de Monkowty, Pie IX, Prevost, Exquis, Delices d'Hardenpont of Belgium, Laure de Glymes, &c. We name only these, as a *resumé* of all that is interesting in the way of new fruits will appear in an early number, by Mr. Cabot, President of the Mass. Hort. Society. We shall also give a brief account of a large number of new fruits which we find enumerated in the latest catalogues of our foreign correspondents. We had intended to notice again the Ohio strawberries, but the able Chairman of the Committee on Gardens of the Mass. Hort. Soc. has done this so fully as to make what we should say a mere repetition of words. We particularly invite the attention of cultivators to all the reports which appear in another page of this number: they will be found exceedingly interesting.

FLORICULTURE.

If the taste for the culture of plants and flowers has not kept pace with that for fruits, it has still made a good advance, especially in the out-door or hardy department of ornamental gardening. The rigor of our climate renders the greenhouse or conservatory an almost indispensable appendage to every town or country residence. The expense of their construction is not large, considering the amount of gratification they afford. For one half of the sum that is often lavished upon a dwelling, without enhancing its beauty, a neat house for plants might be erected. Even such a place as that described by our correspondent, Mr. Davis, (p. 159,) would be far better than none; and to all who love a good garden, would aid materially in stocking it during summer with many of our choicest plants.

> "Who loves a garden loves a greenhouse too,"

was a true expression of the poet, and we are often surprised to see how little those who delight in the pleasures of a fine garden, appear to appreciate the luxury of a conservatory.

The Victòria règia has been an object of attraction the past season. To Mr. Allen, of Salem, is due the credit of flowering it in our vicinity. Several blooms have been exhibited at the rooms of the Massachusetts Horticultural Society, and afforded much gratification to those who could not find it convenient to visit Salem. Mr. Allen has given a full and very interesting account of the progress of his plant (p. 367) from the sowing of the seed to the production of its flowers. Its rapidity of vegetation is wonderful, and, with its remarkably constructed leaves and huge flowers, is one of the most singular and beautiful objects of vegetation. Mr. Allen has, we believe, recently rebuilt his house, so as to give the plant more room and show it to much better advantage.

In a previous volume we made some remarks upon the growth of the camellia as a hardy shrub; we are still inclined to believe it may yet become acclimated, at least in the Middle States. Dr. Edmondson, of Baltimore, winters hundreds of plants in the open air. Last spring, in the month of February, with the thermometer many degrees below freezing, we saw them in fine order at his residence. The plants were mostly seedlings; they were placed in a pit, running east and west, boarded up on the south side, with a roof sloping to the south, and, with the exception of a few boards to hold the covering of leaves over the pots, to keep out frost, it was quite open to all the cold winds on the north. Here the plants looked just as fresh as if in the greenhouse. The cold does not appear to injure them; but it is their exposure to the hot sun, and the repeated thawing and freezing of the foliage and young wood which ultimately causes their death.

If they can be planted under the shade of evergreen trees, where the sun will not reach them, we believe they may be grown even in our latitude of 42° north. The camellia comes from the same country, the same latitude, and is found growing in the same forests, as the Tree pæony, one of our most magnificent garden shrubs, which for many years was cultivated as a greenhouse plant, till accidentally found to be quite hardy; and the experiments of Dr. Edmondson are so satisfactory, that we hope further trials will be made by other cultivators to thoroughly test the hardiness of the camellia under favorable conditions.

Other China and Japan plants, of more recent introduction than the camellia or pæony, show the hardiness of the vegetation of those countries. The Wistàr*ia* and Magnòl*ia* conspícua were for many years cultivated only as greenhouse plants, but they are now found to be as hardy as our native shrubs. The Double Japan Spiræa, (*S.* prunifòlia,) Weigèl*ia* ròsea, and Forsyth*ia* viridíssima, all from the locality of the camellia, have proved perfectly hardy, and are among the most beautiful shrubs we possess. Deùtz*ia* grácilis and *J*asmìnum nudiflòrum we have not yet tested, but we believe they will prove to be quite as hardy as the others. With such examples of the hardiness of Chinese plants, it is certainly an object of no little importance to try every means of acclimating so splendid a shrub as the camellia.

Many new and fine plants have been added to our collections during the year, notices of which will be found under our Floricultural head. Some of the more rare we enumerate, viz.:—*L*ilium gigánteum, Achimenes of several varieties, Medinilla magnífica and Siebòld*ii*, Aphelándra Griesbrecht*i*, Verbena Madame Lemounier, Clematis Sophia, (Siebold*ii*,) Pansy Inimitable, Pæonies Ne Plus Ultra and Festiva maxima, Rhododendron Dalhous*iæ*, Fuchsias Ochroleuca and Roi des Fuchsias, &c., &c.

ARBORICULTURE.

The introduction of new trees and shrubs for ornamental plantations, is becoming more extensive every year; there is a manifest desire among amateurs to obtain a greater variety than heretofore, particularly of evergreens; confined as planters have been to a half a dozen kinds, they feel the want of the beautiful species which are now attracting so much attention abroad. Consequently a rapid demand has sprung up for all that are known to be perfectly hardy, which our nurserymen are unable to supply. Already the number of Coniferæ, which have been introduced to cultivation in Great Britain, exceeds *two hundred;* but the number of them which are known to be hardy with us, is yet limited. They have been collected chiefly from the high latitudes of Mexico, South America, California, and the East; and though a greater portion of them will undoubtedly stand the climate of the Southern States, only a few have so far been found to succeed in the latitude of 42° N. It is this information which we now so much need. We do not expect to find many more graceful trees than the hemlock, more stately than the Norway spruce, more grand than the cedar of Lebanon, or more generally useful than the arbor vitæ; but this should not prevent us from surrounding our dwellings with every hardy species, which, at the same time they afford shelter from our chilling blasts of winter, please us by their variety of verdure, their difference of form, and their peculiar characteristics of growth.

We have labored to accomplish so desirable an object, and have given, from time to time, such information as would aid our nurserymen, as well as gentlemen interested in the subject, to select such as would be most likely to succeed. In the early part of the last volume (p. 272) is a list of all the evergreen trees which withstood the very cold winter of 1852 and 53, in Scotland, almost as severe as the average of our winters here; and we have but little doubt that a large part of those which were uninjured will be found equally hardy with us. At p. 548, we have given a list of a few trees at Linmere, the residence of R. S. Fay, Esq., showing their rapidity of growth, &c. We have, in our own collection, a number of species, which we shall report upon another year. In the mean time, we invite our friends, who feel the least interest in the introduction and cultivation of evergreen trees, to send us any information which will assist us in accomplishing the object we have in view.

From California we had hoped to have had valuable accessions; but beyond a few trees raised by Mr. W. R. Prince, from seeds brought home by him, we know of no additions worthy of note. We yet hope to find some ardent lover of beautiful trees, who will send home seeds of the many fine species which inhabit the elevated portions of California, and which would be acquisitions of the greatest importance.

Rural Improvement.

If we had not occupied so much space already, we should be tempted to extend our remarks upon the state of Rural Improvement generally; but our correspondent, Mr. Flagg, has, in his series of articles, so well pictured its condition, and pointed out what should be true taste in the laying out of suburban residences, the adornment of rural houses, the beautifying of towns, and the improvement of cemeteries, that we shall only reiterate what he has already said in extending the subject. We agree in the main with Mr. Flagg in all he has written, and commend his articles to all who would wish to see our country residences laid out in simple, but good taste, free from the diffusely ornate style which too generally prevails, and which has been too much commended by theoretical writers, and looked upon by many as the very embodiment of landscape art.

Commercial Gardening.

Commercially viewed, our nurseries were never in a more flourishing condition. The demand for trees is extensive, and the supply scarcely adequate to the demand. California has continued to take off the surplus which ordinarily would remain on hand, and extensive importations have been made to keep up the stock. The Western States are entering more extensively upon the cultivation of pears, and have drawn heavily upon the Eastern States for a supply. In all this there is good encouragement to the enterprising nurseryman. It will enable him to keep a better supply, and a young and vigorous stock; and while he is reaping a good harvest, he will be conferring a great benefit upon his purchasers. What we wish to see is the production of all the trees we require; for the annual importation of such large quantities requires a great amount of ready money, which might be retained at home. With such a varied climate and rich soil, we ought no more to import our trees than our cotton or wheat.

HORTICULTURAL LITERATURE.

But little has been added the past year to our stock of horticultural literature. The only works of note have been reprints or new editions. Of these we have had Allen's *Treatise on the Grape;* and Stockhardt's *Chemical Field Lectures*, translated by the late Mr. Teschemacher. The new volumes are Chorlton's *Cold Grapery*, and the *Hand-Book of Ornamental Trees*, by Thomas Meehan. Dr. Warder's *Western Horticultural Review*, suspended with the close of the 3d volume in October, is to be commenced again on the first of January, 1854. The *New York Agriculturist* has been discontinued, and the *American Agriculturist* substituted in its place, under the charge of its old and able editor, Mr. A. B. Allen, who will undoubtedly make it a valuable periodical.

OBITUARY.

To the list of eminent men who have become identified with Agricultural and Horticultural Improvement, and whose death we have so recently mourned, we have to add the names of John Delafield, Esq., of New York, Ex-President of the New York State Agricultural Society, and J. E. Teschemacher, Esq., of Boston. Mr. Delafield was one of the most enthusiastic agriculturists of New York, and was untiring in his exertions to improve the condition of farming throughout the State. Mr. Teschemacher was one of our ablest writers upon Horticulture, and throughout the nineteen volumes of our Magazine may be found valuable articles from his pen. He had just removed to one of our suburban towns, where he could enjoy the luxuries of a good garden, when his sudden death took place.

Art. II. *Appearance of Trees in Winter.* By Wilson Flagg.

Our attention is not often directed to the forms of trees as they appear, when divested of their foliage. But when we consider that for the space of six months all the deciduous tribes are leafless, we cannot regard their appearance, during this period, as a matter of trifling importance. When trees are in leaf, their qualities of beauty or deformity, except those of their foliage and general outlines, are not very apparent. In winter, when every part is exposed to sight, the forms and arrangements of their branches are their most important features. In the selection of trees for ornamental purposes, therefore, a great point would be gained, if we should plant those kinds which are beautiful in winter, on account of the fine shapes and proportions of their limbs, no less than in summer, on account of the character of their foliage and their general outlines.

In considering the forms and beauty of trees, four points are to be regarded:—First, their general shape and seemliness; second, their subdivisions, and the arrangement of their branches in relation to the main stem; third, the character of their *spray*,* or the forms and direction of their minute and terminal branches; fourth, the style and quality of their foliage. I have already treated of their foliage and of that beauty which consists in their general outlines. In the present essay, I shall treat particularly of the comparative beauty of trees, as seen in the winter, and shall endeavor to point out the peculiarities that distinguish the common species in our woods and enclosures.

The qualities most conspicuous in the oaks, are strength and sturdiness. Their branches are seldom straight, and usually make a slight bend at every subdivision. They have, likewise, a habit of forming protuberances at the joints of their limbs, and along the course of the main stem. Hence the expression, "the knotted and gnarled oak." The white oak seems to possess more of the characteristics of the genus than any other of the American oaks. The form of outline assumed by these trees, when growing singly on a plain, from their first planting, is that of a hemisphere. They are inclined to extend horizontally about as much as they rise perpendicularly. This is one of the qualities that causes that appearance of sturdiness which is peculiar to the genus. It is true that we seldom see in our fields an oak of this shape in perfection, because almost all that are in existence in this country took their first start in a forest, and have retained more or less of that imperfection of development which was caused by their cramped position, while they were receiving their earliest bent. The spray of the oak has the peculiarities of its longer branches. The terminal branches are short and angular, but when viewed against the sky, they exhibit a net-work which, without any formal regularity, is rather pleasing to the sight.

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* *Spray.*—This word, in the dictionaries, is defined a small branch, also the ejected water of a fountain. I have used it with an extended signification, so as to include all the smaller and terminal branches of the tree, to which, in a figurative sense, according to the second definition, it might be applied, without any abuse of etymology.

In our orchards the apple tree most nearly resembles the oak in its general outlines, having, like the oak, though inferior to it in size, more sturdiness than grace. A standard apple tree commonly resembles a hemisphere, being in diameter about twice its own height. The pear tree is taller, more nearly pyramidal, and perhaps more graceful. Its branches have not the horizontal tendencies of those of the apple tree. It divides the stem into several branches, which, after making a slight horizontal curve, extend upwards almost perpendicularly. As the pear tree grows older, it loses its beauty of form, on account of the weight of its fruit, which bends down the branches and gives them a peculiar straggling growth. No such effect is produced in the apple tree by the weight of its fruit.

One fact is worthy of notice with respect to our own fruit trees, which is, that a large proportion of them are perfect trees, having always had ample room to expand, and to develop their lateral branches. A large proportion of our forest trees, on the contrary, are either pollards and suckers, or individuals which have lost their beauty and their characteristics, by growing in a crowded forest, during the early stages of their existence. Even among those trees which have been planted by our roadsides, so many were mutilated for the purpose of transplantation, that but a few have attained a perfect shape and size. The present generation, therefore, must go to England, if they wish to see the indigenous trees of our own woods in all their beauty and perfection.

Another fact is noticeable in the growth of fruit trees as compared with the seed-bearers in the forests. The former are greatly deficient in anything like grace, beauty, or elegance in their spray. Their smaller branches are blunt, short, crooked, and standing apart. A difference too may be observed in the forest trees in this respect. The nut-bearers, in general, have a coarser and shorter spray than the small-seed-bearers, with some exceptions. Compare, for instance, in this respect, the elm with the horse-chestnut. There is no quality of more importance to the beauty of a tree, in winter, than a full, dense, fine and elegant spray. Hence the superior beauty of forest trees in general, compared with the trees of the orchard.

Nothing can exceed the American elm in a certain harmonious combination of two qualities which are seldom united in the same tree—sturdiness and grace. One of its manifest peculiarities is the length and slenderness of its branches, which, at the same time, exhibit nothing in their appearance that is at all suggestive of weakness. There is nothing so agreeable to the mind as a truly happy combination of two qualities which are generally considered incompatible. This remark applies particularly to the creations of art and genius, but may be applied with equal truth to the productions of nature. The American elm possesses a feminine gracefulness, in alliance with masculine strength, that affects every observer with a peculiar sensation of beauty and grandeur.

The trunk of the elm, after ascending to a certain height, divides itself into many branches of equal size, given out from a common centre, at an acute angle. These, after gradually diverging, are constantly subdivided into smaller branches, that bend over and downwards with a graceful sweep, reaching in old trees almost to the ground. There are, among our elms, exceptions to this weeping habit, which have led some botanists to divide them into two distinct species. There are but few trees in our forests that equal the elm in the beauty and gracefulness of its spray. On account of the length and multiplicity of its branches, diverging, in a perfect tree, almost from a common centre, then bending over, and forming in their outline an almost hemispherical head, the elm is the most beautiful of trees when divested of its foliage, and, more than any other tree, resembles in the general arrangement of its branches, the spray of a *jet-d'eau*. I do not except the weeping willow, whose large branches are not so generally given out from a common centre, but are subdivided at different places. The weeping habit of the willow is conspicuous chiefly in the sudden droop of its slender terminal branches; whereas the large branches of the elm make an arch, by gradually bending over from their joints to their extremities. Hence of the two, except when covered with foliage, the elm is the more graceful and elegant. The foliage of the elm is neither beautiful nor brilliant, not deeply green in summer, or very brightly tinted in autumn, nor are its leaves tremulous in the wind. In richness of foliage it is surpassed by the English elm. But in its general aspect, both in summer and winter, it exceeds every other tree that can be named, in a rare combination of grace, majesty and beauty.

Another peculiarity of the elm consists in a habit of throwing out small branches, resembling vines, often arranged all along its main stem, and sometimes creeping downwards. These might almost be mistaken for a parasitic growth; and they have a singular beauty which does not detract from the majestic appearance of the perpendicular trunk. I have sometimes found birds' nests in the little tufts formed by these vine-like branches, that seldom project a foot beyond the stem of the tree. This singularity of growth is chiefly confined to trees which have grown up spontaneously in the fields, and is seldom observed in those in our town avenues. It is associated in our minds with the country, and serves to add a picturesque expression to the other beauties of the elm.

The maple divides into numerous large branches, which are of unequal size, and run out in a straight direction, diverging always at the same angle, instead of curving outwards. It is a very elegant tree, but does not often attain that size which is necessary to yield it an aspect of grandeur. Its foliage is surpassed by that of only a few trees in beauty of shape and hues, being of a very deep green in summer, and having a great variety and brilliancy of coloring in the autumn. The maple runs up in height like the lime, more than it spreads horizontally, so that its height in general exceeds its diameter. Its outlines, therefore, are those of an elongated hemisphere, and are remarkable for their evenness and regularity. A tree of this genus seldom exhibits any gaps in its outlines, on account of a certain constitutional vigor, which enables it to restore the branches which have been broken or lopped from it. The maples, being distinguished for the smooth and cinereous surface of their branches, and the agreeable regularity of their forms and manner of growth have a singularly elegant appearance in winter.

There is no tree in our woods that is so prim and formal in its growth as the ash. The same formality is observed in a greater or less degree in all trees whose branches are opposite, as in the horse-chestnut. The ash attains a very great height and size, and on account of the tendency of its branches to curve inward as they ascend, it exhibits more convexity beneath than most other trees, whose general outlines beneath are horizontal. The head of the ash is globular rather than hemispherical, like the oak; and the primness and formality in the arrangement of its branches are unfavorable to the expression of grace. It is distinguished by a general bluntness in the terminations of its smaller branches, and has, for this and other causes, but little elegance of spray. But there is a stateliness in the general bearing of the ash, and a beauty, when it is in full foliage, that make some amends for these unfavorable qualities which I have named.

The horse-chestnut when divested of its leaves, is but a miserable looking object, with its terminal branches resembling drumsticks, its primness without grace, and its amplitude without grandeur. Neither is it a very comely tree when covered with foliage, which is of an indifferent green, and without density. It is beautiful only while in blossom, when it is unsurpassed in its magnificent display of flowers, "which give it the appearance of an immense chandelier covered with innumerable girandoles." The birds seldom build their nests in its branches, which are not sufficiently close to afford them protection. Its fruit, which is borne in great abundance, sustains neither beast nor bird, nor is it profitable to man. This may, therefore, very properly be regarded as an emblem of idleness and waste.

The chestnut may be compared advantageously with the elm and the oak in size, and resembles the latter in many of its habits. It spreads horizontally more than it runs up in height, and has all the grandeur that appertains to trees of this shape and size. The foliage of the chestnut is peculiarly elegant and graceful; and although it is not a weeping tree, its lower branches have a peculiar droop, not unlike that of the beech. On account of the value of the produce of this tree, there are more beautiful and perfect individuals, resembling park trees, to be found in this country, than of any other species, except the elm.

The beech, which is a classical tree, deserves rank with the most beautiful in our forest. Virgil applies the epithet "wide spreading" to this tree; but in our own land, as this species has never been chosen for ornamental purposes, we see those only which have lost their characteristics by growing in a crowded forest. I have never seen a perfect tree of this species, and am enabled to speak of its peculiarities of growth, only by observing the outer side of those which are found growing on the edge of a wood. In these the peculiarity which would cause the term "wide-spreading" to be properly applied to them, is very apparent. One remarkable feature of this tree, and which renders it, even when divested of its foliage, a very beautiful object, is a singular sweep of its branches, especially in the lower part of the tree. As they extend, they first incline upward, then make a gradual bend downward, curving upward again at the extremity. Every small twig turns upward, forming a very elegant spray, which is still more attractive on account of the minuteness and density, as well as the neat arrangement of these terminal twigs, each pointed with the leaf buds, resembling little spears. A certain horizontal tendency of the lower branches of the beech tree causes it sometimes to exhibit a double head, or a dividing space between its upper and lower part. This appearance is produced by a kind of sucker growth of nearly horizontal branches, around and a little below the place where the trunk is subdivided. The beech is distinguished for the deep and brilliant verdure of its leaves, no less than for their density and finely serrated forms. On account of the neglect which this tree has suffered from our predecessors, who never planted it for ornamental purposes, the present generation is condemned to behold the most beautiful of American trees almost entirely confined to the forest.

Those who think that sturdiness is incompatible with a drooping habit of the branches, have probably formed their opinion, by observing the aspect of the weeping willow. In this beautiful and celebrated tree, the extreme slenderness of its terminal branches, combined with its almost linear foliage, destroy that majestic appearance which generally appertains to trees of large size. The weeping willow, though resembling the elm in its outlines and its drooping habit, is subdivided in a different manner, as I have already remarked. Hence, except when in foliage, it has less graceful regularity than the elm. Other species of willow, whatever may be their size, are equally deficient in an appearance of sturdiness and strength. The willows are, for the most part, very graceful trees, and are pleasantly associated with lakes and water-courses, around whose borders they are frequently found.

The poplars, still more than the willows, which are an allied genus, are wanting in sturdiness, and their principal charm consists in the graceful and tremulous character of their foliage. Most of the species have a tendency to uprightness rather than spread in the direction of their branches. They are likewise prone, like the coniferous evergreens, to run up in a single stem to their summit, throwing out lateral branches instead of subdividing into branches of nearly equal size. Their general defect is a want of density, both in their branches and foliage, which is remarkable in the American aspen. The latter, however, exceeds all other native species in the beauty and tremulousness of its leaves, which are heart-shaped and smooth. The Italian poplar, once a favorite tree for avenues, may be said, in its general growth, to exhibit the pattern of its tribe, but it exceeds the other species in density of foliage. It seldom or never divides the main stem, except when trimmed, which runs up perpendicularly to a great height, surrounded by lateral branches given out at a very acute angle. Hence its form approaches that of an obelisk. Many of the poplars are remarkable for an agreeable balsamic fragrance, emitted when the tender leaves are bursting their hibernacles in spring.

The birches are a peculiar genus of trees. The small white birch exhibits the peculiarities of the Italian poplar, not only in the shape and tremulous habit of its leaves, but also in its manner of growth and the arrangement of its branches. Like that tree it seldom divides the main stem, that runs up in a single branch to its summit. Its lateral branches are numerous, and given out at a wider angle than those of the Italian poplar. These are long and slender, and form a very elegant spray. The bark of the small branches is of a reddish color, forming a singular and pleasing contrast with the whiteness of the trunk. This tree, when it has a chance to expand, assumes more nearly a pyramidal shape than other deciduous trees, with the exception of the larch. The other birches are not unlike the maple in their outlines, and the divisions of their branches. The foliage of the yellow birch is very graceful, and the terminal branches are often somewhat drooping.

The swamp hornbeam is another tree that sends up a single stem to its summit, but resembles no other tree in its general development. It gives out its lateral branches in a horizontal direction, so crooked as to seem almost fantastical. The branches are bent downward, as if they had been subjected to some pressure from above. They do not grow in whorls as in the fir tribe; but they often exhibit this appearance, when observed at a distance, causing a peculiarity of shape which has won them the name of umbrella tree, in certain localities. This tree is as knotted and gnarled as any species of the oak, the branches pursuing a straggling and zig-zag course, from their joint to their extremities. The foliage of the hornbeam is dense, shining and brightly green; but in its general appearance this tree is rather grotesque than beautiful.

One of the most common of our indigenous tribes is the walnut or hickory. The different species of this genus do not greatly vary in their general or particular development. They have many of the characteristics of the oak, being rather prim when young, and becoming gnarled when they are old. They are less inclined than the oak to spread, with the exception of the butternut, which seldom attains the size of the other species. The largest of this genus, and the most stately in its general appearance, is the bitternut (*Juglans amara*). This species is not common, and resembles the ash in its external habit.

The lime tree is subdivided like the maple, but not so beautifully as the elm. It is a graceful tree, having a tendency to increase more in height than in breadth. It is remarkable for a net-like arrangement of the smaller branches, as seen from a distance, against the sky for a back ground, and forming a very beautiful spray. This is a method of viewing trees, which may be recommended for the purpose of comparing the respective appearances presented by the different species in winter. There is no great dissimilarity between the American and European lime, except that in the former both the leaves and flowers are larger, and the flowers whiter and more conspicuous than those of the European species.

I have thus far treated only of deciduous trees. It remains to say a few words of the evergreens, of which the coniferous tribes are the principal in our woods. I shall treat of these briefly, because, on account of their evergreen foliage, the arrangement of their branches is not so conspicuous as in the deciduous tribes. I have already stated in a former essay that the coniferous trees are remarkable for giving out their branches in somewhat irregular whorls from a single perpendicular trunk, and nearly at right angles with it. The junipers and arbor-vitæs, if they are to be ranked with the *coniferæ*, are partly an exception to this manner of growth. They have a single perpendicular stem, with the lateral branches growing irregularly around it, and at acute angles with it. Hence there is more grace and less formality in the shape of these trees than in that of the firs. In the larch, which, though belonging to the coniferæ, is not an evergreen, the arrangement of its branches in whorls is not so conspicuous as in the evergreen species. The common cherry tree of our gardens is addicted to the habit of giving out its lateral branches in whorls, which are very apparent in young trees.

While preparing these observations for the press, I am conscious that they are very imperfect, and that other observers might point out to me many errors in my details. I submit them, with all their faults, in the hope of directing public attention to a class of observations, which have not as yet been very general.

Beverly, *Dec.*, 1853.

ART. III. *Some Remarks on the Shenks Pear.* By J. B. GARBER, Esq., Columbia, Pa.

DEAR SIR:—On receipt of the October No. of your Magazine, I noticed that you had examined specimens of "Schenk's Pear," and promised to say more about it in the November No. I had intended writing you on the subject, but other matters prevented until now. As the November No. has just come to hand, and the promised correspondence between the late R. Manning and myself, thirteen years ago, has come to light again, I cannot refrain from giving you a few words of explanation in reference to this pear,—the correspondence of Mr. Fahnestock and your remarks in relation to it. I may not be correct as to the age of the variety within ten or perhaps twenty years; but that matters very little. It was raised by the person whose name it bears, (the Germans write the name *Schenk,*) and in the manner stated. The township is printed *Waver;* it should be *Manor,*—a mere error of the compositor, or transcriber, owing probably to my careless manner of writing. Your cut and description is nearly correct; generally the stem is more inclined to one side, and the fruit less regular.

I was much surprised to hear that in Mr. Manning's collection, this pear, "if allowed to hang upon the tree too long, is *mealy* and almost worthless," and you recommend it to be gathered early and ripened in the house. Now, in this section of country, to hear of this pear being *mealy* in *any condition* is certainly news to us. In fact, the only fault *I* find with it is, that it is *too juicy;* like a heath Cling peach, or a ripe watermelon, the whole substance of the fruit (except the rind and core) dissolves in the mouth. When the trees grow on our rich, low, limestone soils, the fruit is larger, more watery, less colored, and less aromatic; but where the ground is elevated, the soil poorer, slaty, stony, or less calcareous, the tree remains smaller, bears more and fairer fruit, the fruit becomes as yellow, on full maturity, as a ripe lemon, with frequently a bright blush towards the sun; the fruit is also higher flavored and more perfect, and the longer it remains on the tree, without decaying, the more the flavor improves, —never mealy.

The favorable opinion you express of those specimens sent you by Mr. Fahnestock, you attribute to the fact that they were "picked green and hard!" Now I can assure you, had these specimens remained on the tree one or two weeks longer, and eaten *fresh from the tree*, their flavor would have been much superior, and the color more yellow.

When I sent the box of pears to Messrs. Thorp, Smith, Hanchett & Co., I had no fears of their losing caste in comparison to *any* other variety of pear ripening at the same time, *native* or *foreign*, so far as their size and general appearance was concerned; but I did feel some anxiety, on account of having to send them hard and immature, that they would be wanting in that peculiar flavor or aroma, so generally admired by all who are acquainted with, and can properly appreciate, a good fruit perfectly matured. The result has verified my fears on that head. I am well aware that soil and exposure have a great influence on many varieties of fruits, but had no idea that this pear would become mealy in any situation, as the location here improves it if high and dry, —the more elevated the more flavor. If I am not mistaken, Mr. Manning's location is on a level soil, and probably in a more humid climate than with us, and am therefore the more surprised that this pear should prove as stated in your article.

Columbia, Pa., Nov. 1853.

We have one word to say in regard to our remarks relative to the ripening of the Shenks pear. It might be inferred from what we stated, that Mr. Manning was unacquainted with the proper season of gathering summer pears, as he found the Shenks "mealy and nearly worthless." This, of course, was not what we intended to say, as our Salem pomologists have learned beyond that point; but rather that once having formed an unfavorable opinion of it from specimens which had hung too long, he had not taken any especial pains to gather it with a view to improve its quality. Since we wrote our article referred to by Mr. Garber, we have had a note from Mr. Manning, in which he states that "he does not consider the Shenks by any means a poor pear, but thought it hardly worth growing, because there are so many better ones at the same season; but if it should yet prove first rate, it will not be too late to change his opinion."

It is somewhat singular, however, that the Shenks should have ever been "mellow or mealy" in Mr. Manning's garden, when Mr. Garber has never known it to be the case with him. And the circumstance can only be attributed to a dry summer, a very heavy crop, or some other cause not likely often to occur.—Ed.

ART. IV. *Description and Engraving of the Fruit-Room of the Duke of Buccleugh, at Dalkeith, near Edinburgh.*

"IT is somewhat surprising," remarks a recent English writer on Horticulture, "after all the expense gone to in the formation of gardens and orchards, the erection of fruit-houses of all descriptions which we see going on from one end of the land to the other, that after all these are completed and the fruit produced, there is not one garden in ten where any reasonable provision is made for its proper reception and preservation."

This remark may equally apply to our own country. We know that thousands and tens of thousands of pear trees,—to say nothing of other kinds of fruit,—have been planted during the last ten years, in many instances in single orchards of four or five acres in extent, and yet we are not aware that provision has been made for storing and ripening the fruit, in even as large a proportion to the number of gardens as that named by the writer just referred to. Very recently several amateur cultivators of the pear around Boston, have erected fruit-rooms, and have been very successful in preserving and ripening the fruit; but beyond this, we have heard of no instances where any particular pains have been taken to accomplish so important an object.

We are aware there is a great diversity of opinions as to the best mode of preserving fruit; some succeeding very well in one way and some in another; while others again cannot obtain any satisfactory results by the modes in ordinary practice. A majority of cultivators do not seem to be aware that there are fixed principles which should govern them in the ripening and preservation of fruit, and without following which they cannot hope for great success. To expect to arrive at it by any "secret" plan, is fallacious. Guided by these principles, fruit may be kept as long as its natural period of existence, and beyond this no "mystic" art can preserve it and retain its qualities.

In our volume for 1852, (Vol. XVIII,) we gave two articles on the ripening of fruit and construction of rooms, and in order to present all the reliable information we can procure on this very important matter, we now give a description and engraving of the fruit-room at Dalkeith, Scotland, the residence of the Duke of Buccleugh. Very extensive fruit gardens are connected with it, and large quantities are gathered for preservation. The Duke's gardener is Mr. C. McIntosh, author of the *Book of the Garden*, now publishing in numbers, from which we copy our account:—

The fruit-room in the Horticultural Society's garden at Chiswick is a long, narrow apartment, having a northern exposure. The floors are formed of concrete, to prevent rats or mice from getting in; a counter-like table occupies the centre, and the sides are fitted up with shelves of open trellis-work, on which the fruit is laid. Such, we may here observe, is the general form and arrangement of what may be called the better sorts of fruit-rooms. The fruit-room at Dalkeith is almost a fac-simile of this one, being furnished with shutters to the windows inside, and box-ventilators *a* through to the ceilings, and extended to an opening in the top of the back wall, as will be seen by *fig.* 1. In this fig. we have shown what we consider to be the best kind of building for this purpose. The walls are built hollow, to resist external damp, heat, and cold, Ventilation is carried on by an opening in the ceiling, and the damp or foul air made to escape through the box *a*, and out at the top of the wall. Both ends of this ventilating tube are to be shut, when necessary, by letting down the flap lids *b b*, to which a line and pulleys are applied for the purpose. The ceiling is triple-coated with plaster, and deafened with nogging above. The slates are laid in mortar, also to exclude

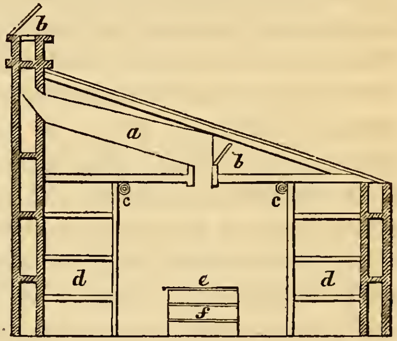


Fig. 1. *Fruit-Room at Dalkeith, Scotland.*

air, and double-thick sarking is laid under them, tongued and grooved. Thin canvass curtains, hung on rollers *c c*, are let up and down in front of the shelves, to exclude air and light when it may be necessary to open the door. The fruit is laid upon the side shelves *d d*, on both sides, and the operation of sorting is carried on on the counter-like table *e* in the centre. Under this table are drawers, *f*, for the finer specimens of both apples and pears. The whole of this department is darkened by keeping the window-shutters shut; and as the decomposition of fruit appears not to be so much affected by candle light as by solar light, the necessary operations are carried on by that light entirely. We have deemed it unnecessary to give a ground-plan of this erection, as it will appear sufficiently obvious and clear that a vestibule or entrance apartment may be made, in which specimens of the various fruits may be exhibited, and where the necessary operations of packing and arranging the dessert may go on. The side shelves may be enclosed by having folding-doors in front of them, and they may also be divided into compartments of from 6 to 10 feet in length each. If it be found inconvenient to have a fruit-cellar under such a room, it may, if of sufficient size, be divided into two apartments, one of which may be dedicated to the preservation of the later kinds, and therefore may be kept darkened and shut up; while the other department is set apart for cleaning, packing, exhibiting the fruit, and ripening it off for use.

This, it is true, is a thoroughly constructed house, and probably built without regard to expense, but the same form and style may be adopted on a cheaper scale; though where there is much valuable fruit, a good building will be cheapest in the end. Those who are about constructing fruit-rooms, can compare this with the plans in our volume above alluded to, and adopt such parts of each as appear best adapted to the location, &c., premising as we do that each will answer the purpose, though one may be better than the other.

MISCELLANEOUS INTELLIGENCE.

ART. I. *Domestic Notices.*

PROFITS OF FRUIT CULTURE.—*The Lady Apple.* During the New York State Fair at Saratoga, evening meetings were held by the cultivators present, for pomological discussion.

The subject of the profits of fruit culture being introduced, some statements were made of the large profits derived from the culture of the Lady Apple. W. H. Denning, of Dutchess county, had annually sold forty dollars worth of fruit from a single tree, the price varying from eight to twelve dollars per bushel. The soil was gravelly. On soils of a different character the crop had been quite unsuccessful. One gentleman had picked ten barrels from his trees, and found only two barrels fair, the least blemish entirely spoiling the sale of a fancy fruit. Another gentleman stated that, from an orchard in Orange county, out of five barrels he had not obtained a single hatful of good specimens. Dr. Ward said that in New Jersey it succeeded well on gravelly loam, which was generally admitted to be its best soil. Information was given of the large profits of an orchard at Darley, near Philadelphia, containing 200 trees, and occupying four acres of land. The average annual net profit was $800, or $200 per acre. The soil of the orchard is constantly cultivated in crops, with the application of bone dust, and it is regarded as one of the neatest and best specimens of orchard culture in the State.

The high price of this apple depends entirely on the demand for it in cities, for fashionable evening parties, which is far greater than the supply. American grown Lady Apples also command a very high price for the same object in London. The opinion was, however, expressed, that as it is not a fruit of the highest character and value, and the fashion may not always continue in its favor, it would be unsafe to plant it largely, or exclusively for market.—(*Horticulturist for* 1853.)

THE PAULOWNIA IMPERIALIS flowered freely with me, last spring, and has risen much in public estimation in this vicinity. My magnolias were splendid; the tripétela and the Thompsònia were in perfection. The latter bids fair to be an important addition to our shrubbery. I have perfect success in cultivating this family, by transplanting one-year-old seedlings of the cucumber tree, (M. acuminata,) from the forests—taking them up with a ball of earth. When three years old, I side-graft them with other species, and at the end of five years have them in full bloom.—*Very truly yours*, J. P. KIRTLAND, *Cleaveland, Ohio.*

CULTURE OF THE PEAR.—At the meeting of the Northwestern Fruit Growers' Convention, of which we gave some account in our December No., a paper on the cultivation of the pear was read, from Dr. J. P. Kirtland. Undoubtedly it embodied much valuable information to cultivators of this fine fruit, especially in the west, where his long residence and many years of experience and careful observation, has enabled him to impart such knowledge. We shall look for its early publication in the *proceedings* of the convention, and give an abstract of it in our own pages.—ED.

Art. II. *Massachusetts Horticultural Society.*

Annual meeting, Oct. 1.—The following vote, passed at this meeting, was omitted in our Report:—

On motion of Dr. Wight, it was voted, that the Chairmen of the Fruit, Flower, and Vegetable Committees be *ex-officio* members of the Committee on Gardens.

On motion of Mr. Hyde, it was voted, that the Committee to nominate officers for the annual election be appointed at least six weeks before the annual meeting, and that they report a list of the officers selected, and place it in a conspicuous situation in the Library Room, on or before the first Saturday in September.

Adjourned two weeks, to Oct. 15th.

[The following members have been elected since the previous reports:—R. M. Copeland, Auburn Dale; Levi Jennings, Newton, L. F.; Wm. J. Underwood and E. B. Ford, Boston; M. D. Parker, Brookline; R. W. Turner, Newton; Prof. John Wilson, of the Cirencester Agricultural College, Eng., was elected an honorary member.]

Oct. 15.—An adjourned meeting of the Society was held to-day,—Vice President Richards in the chair.

There being no business, the meeting was adjourned one week, to Oct. 22d.

Oct. 22.—An adjourned meeting of the Society was held to-day,—the President in the chair.

A letter was read from Dr. Guiseppe Monachini, Candia, in Crete, acknowledging the receipt of a diploma, making him a corresponding member.

Adjourned one week, to Oct. 29th.

Oct. 29.—No business of importance was transacted—and the meeting adjourned two weeks, to Nov. 12th.

Nov. 12.—An adjourned meeting of the Society was held to-day,—the President in the chair.

Mr. Walker communicated to the Society the death of Mr. J. E. Teschemacher, and moved that a committee of three be appointed to draw up resolutions expressing the feelings of the members at his sudden decease, and conveying to his afflicted family the condolence of the Society.

Messrs. Walker, King, and B. V. French were appointed the committee, to report at next meeting.

Adjourned three weeks, to Dec. 3d.

Dec. 3.—An adjourned meeting of the Society was held to-day,—the President in the chair.

Mr. Breck, from the Committee of Arrangements, 1853, submitted a report of the proceeds and expenses of the Annual Exhibition, which was accepted.

Mr. Cabot, from the Committee on Gardens, submitted the report awarding premiums for 1853.

Adjourned one week, to Dec. 10th.

Dec. 10.—Adjourned meeting,—the President in the chair.

Mr. Breck, from the Flower Committee, submitted the report awarding premiums for 1853.

The President, Treasurer, and M. P. Wilder were appointed a committee to settle with Mount Auburn Cemetery.

Adjourned one week, to Dec. 17th.

Dec. 17.—Adjourned meeting,—the President in the chair.

The Executive Committee reported that the same amount be appropriated for premiums for 1854, as was appropriated in 1853, viz., $2,520.

Messrs. C. M. Hovey, Richards, and A. C. Bowditch be a committee to nominate a Committee of Arrangements for 1854.

Dr. Estes Howe, Cambridge, and E. A. Brackett, Winchester, were elected members.

Adjourned one week, to Dec. 24th.

Dec. 24.—Adjourned meeting,—the President in the chair.

The Committee on Fruits, and the Committee on Vegetables, submitted their reports awarding premiums for 1853.

The Committee for establishing Premiums for 1854, submitted their schedule of prizes, which was accepted, and ordered to be printed with those of the Committees awarding Premiums for 1853.

Meeting dissolved.

REPORT OF THE COMMITTEE ON GARDENS,

AWARDING PREMIUMS FOR 1853.

The Committee on Gardens present to the Society a Report of their doings for the past year. The Committee have inspected the gardens and grounds of all those who notified them of their wish to be considered competitors for the prizes offered by the Society, as well as of those who had by invitation or otherwise given your Committee reason to suppose that a visit of examination would be acceptable. Of the gardens submitted for examination, as competing for prizes, an account somewhat in detail seems proper. Of those not considered as coming within this class, no mention is felt to be necessary, unless some attractive novelty, or some peculiar mode of cultivation pursued therein, demanded a notice. On May 17, and again on June 2, the grapehouse of Mr. M. H. Simpson, at Saxonville, was examined by your Committee. The house is situated on the southern slope of a somewhat steep, though gradual declivity, not far from the top of the hill. It has a span roof, and is about 75 feet long, by 22 wide. This house is heated by two cylindrical iron stoves, placed near each end, connected by a funnel, running horizontally, with an upright in the centre to carry off the smoke. These stoves have been in use for four years, and consume from 12 to 14 tons of coal annually. In extreme cold weather the fires have to be attended to during the night; but this is not generally necessary. At the time of the visit of your Committee, there was a remarkably fine crop of grapes upon the vines; the fruit was ripe, both berries and bunches large, and the former well colored and of fine quality; the vines too seemed vigorous and healthy. Of some varieties, as the Frontignans, Cannon Hall Muscat, Muscat of Alexandria, and Chasselas Musqué, the fruit was particularly noticeable for both size and beauty, as well as fine flavor. Peaches are also cultivated by Mr. S., in pots, placed under the grape vines, in the house, in the cold season, and carried out into the open air when the weather is warm and fine. On May 17, Coolidge's Favorite and Royal George were swelling off and coloring finely. The grape vines were started in December, and the first ripe bunches of grapes were cut on May 1st. The house and garden being under the care of Mr. Byrnes, the gardener. Mr. Simpson is of opinion that the method he has adopted for heating his house, possesses decided advantages; that it is very much more economical than any other; and that by it a constant circulation of the air in the house is always kept up and rendered thereby pure. To this last he attributes the health of his vines, and his success with some varieties usually difficult to produce in perfection. In presenting this statement, it is the intention of your Committee simply to present the views of Mr. Simpson, without being understood as either controverting or endorsing them; but they feel that they ought to say that it appeared to them that the situation of the grapehouse of Mr. S. was a most particularly favorable one, for being on the declivity, yet near the top of a high hill, thorough drainage and an abundance of pure air was thereby secured; and it occurred to your Committee that the marked success that has attended Mr. S., in the cultivation of the grape, might perhaps more properly be imputed to his skill and his selection of a site for his house, than to his method of heating.

On June 24 the Committee visited the gardens of Mr. B. V. French, at Braintree. Mr. French is among our most thorough and skilful cultivators of every variety of agricultural and horticultural product. He has more recently been directing his attention to the strawberry, with a view of ascertaining both the best mode of cultivating that fruit, as well as what are its best varieties; and to his experiments in relation to these objects, the attention of your Committee, at this visit, was particularly called. Mr. French cultivates a very large farm, but the Committee felt themselves, by the Rules of the Society, bound to confine their examination to that part of it which might strictly be considered as a garden, comprising in its various compartments, devoted to fruits, vegetables, and flowers, about 4½ acres of ground. The Committee found the gardens and grounds of Mr. French in admirable order. The soil appears to have been originally stiff and hard, but has been rendered, by under-ground draining and other processes, well suited to the uses to which it is now applied. The gardens were stocked with all the better varieties of the different species of fruit, vegetables, and flowers; all of which seemed to be cultivated—judging from their apparent health and vigor—on some well considered and successful method. Mr. French has a greenhouse of 56 feet in length, appropriated to grapes and flowers. He has recently been making experiments with the strawberry, in reference to the best mode of its cultivation, as well as to the quality of the different varieties. The ground appropriated to this purpose, after being thoroughly drained, was trenched to the depth of three feet, and then enriched by the application of various manures. The strawberries were planted in beds, each bed containing one variety; upon one half of each bed the plants were kept in hills; upon the other half the vines were permitted to cover the ground. To ensure the fertilization of the pistillate varieties, a bed three feet in width, and extending the whole length of the plot of ground occupied by the beds, running crosswise, was set with the Early Virginia, the vines of which were permitted to cover the ground. As the different varieties of the fruit were all treated alike, and no one had any advantage of soil or situation, the mode adopted was a fair one to afford an opportunity of testing their comparative merits.

The Committee found in every instance and with all the varieties, as was naturally to be expected, that the vines kept in hills produced the greatest crop of fruit. As the members of the Society are familiar with many of the varieties cultivated by Mr. F., of such your Committee feel that any particular observations with respect to their quality, &c., are uncalled for; but that with respect to others, less generally known, some of the results of their examination may not be unacceptable. In all the beds the vines were vigorous and healthy, with, in most cases, an abundant crop of fruit, of superior quality. Among the various varieties, were the following: McAvoy's Superior, of which the berries, though of fine flavor, were all imperfect; Burr's New Pine, Early Prolific, with small berries of exquisite flavor; Longworth's Prolific, berries large, perfect, very prolific; Huntsman, a pistillate, very great bearer, large berries, but of indifferent flavor; Rival Hudson, small, but great bearer; Hudson Bay, very similar to the preceding; Gen. Jacquemont, of very high flavor, but a shy bearer; Prolific Hautbois, very prolific, small berries, with that very peculiar, though high flavor, that distinguishes the Hautbois, so disagreeable to most persons as to render a perhaps otherwise desirable kind worthless. This variety is so covered with its clear white flowers in spring, as to render it worthy of a place in a flower garden. In addition to these and other varieties, Mr. French cultivates extensively Jenney's Seedling, a good bearer, and when well ripened, a most excellent fruit; Willey's Seedling, a rather small, acid, but good market berry; and those old established favorites, Hovey's Seedling, of which there were superb specimens on the vines; Boston Pine and Early Virginia. With regard to McAvoy's Superior, although great pains were taken to procure the true variety, both Mr. F. and your Committee think it possible some error may have been made, and they therefore refrain from making any further remarks concerning it. And as it respects the other varieties, that though several of them were of fine quality, prolific, and to appearance worthy of cultivation in a large collection, yet, taking all circumstances into consideration, there were none, in their opinion, worthy to supersede such varieties as Hovey's and Jenney's Seedling, the Boston Pine, and Early Virginia.

On the 23d of June your Committee passed some time at the seat of J. D. Bates, Esq., at Swampscot. The house of Mr. Bates is situated on the seashore, and the grounds comprise about 15 acres, devoted mainly to walks and pleasure grounds. The house is an ornamental cottage, and with the grounds seems to combine all the attractions necessary to render a seashore residence agreeable. About two acres are appropriated to the purposes of a vegetable garden, with borders for flowers. This was in a state of perfect neatness and high cultivation; the vegetables were in great variety and very forward, and there was a choice collection of roses and border plants. Another part of the ground was reserved for fruit trees, of which there were many, but mostly recently planted. The grounds are laid out with great taste, under the personal direction and supervision of Mr. Bates himself; a portion of them have been left in a state of nature; other parts have been improved and ornamented with trees and shrubs; the whole being occupied with lawns, groves, avenues, and walks. Mr. B. has planted a great number of Norway maples, ash, elm, pine, and other trees, all of which seemed very thrifty and vigorous. All the arrangements of the place, as stables, poultry houses, &c., were most complete and ample, and comfort and convenience appeared to have been as much consulted and cared for, as ornament and beauty. A grapehouse has also been recently erected. Your Committee noticed here a strawberry, imported by Mr. B. from Ireland, resembling in appearance the Bicton pine, and supposed that it might be that variety.

On June 25th the garden of Mr. I. Babbitt, of Roxbury, was examined. Mr. Babbitt has a small garden, filled with fruit trees and shrubs, together with many varieties of native grapes, a fruit that appears to have received much of Mr. B.'s attention. Mr. Babbitt has displayed much ingenuity in tools of various kinds, and other mechanical contrivances, and has also manufactured a grafting wax, that is said by those who have used it, to be superior to any yet discovered for that purpose. Mr. Babbitt's garden was in fine order, and his trees in good condition.

On August 23d your Committee were at the garden of Mr. John Gordon, and of Messrs. Evers & Bock, at Brighton. Mr. Gordon's garden has been already described in previous reports, and no repetition of this seems now necessary. It exhibited the same evidence of skilful cultivation that has before distinguished it. Messrs. Evers & Bock have recently come into possession of the place occupied by them, and although much had been done to improve it, they did not consider it in a condition to be examined by the Committee.

On August 12th your Committee visited the grounds of Hovey & Co., at Cambridge, and on August 23, those of Winship & Co., at Brighton. Both these establishments are so well known, that any description or account of them by the Committee, seems wholly unnecessary. They are both among the largest commercial gardens in the country, where trees and shrubs, flowers and plants,—both native and exotic,—hardy and tender, are cultivated for sale, in great profusion and almost endless variety. So far as your Committee could judge from an examination necessarily, of grounds so extensive, somewhat hurried, yet not careless, both these establishments were in fine order; the trees and plants healthy and vigorous, skilfully managed and well cultivated. Messrs. Hovey & Co. have a great collection of the different species of fruit trees; a specimen tree of each variety being cultivated to test the quality of the different sorts; and in their hot and greenhouses cultivate a great variety of exotic shrubs and plants. Messrs. Winship & Co. cultivate great quantities of the different species of forest and other ornamental trees, as well as of the different kinds of fruits. In this last department very considerable additions have lately been made to their former stock, by the planting out of extensive beds of pear trees.

On August 30 your Committee examined the grapery of W. C. Strong, Esq., at Brighton. Mr. Strong is among the largest cultivators of the grape in this vicinity; he having, besides a retarding-house, two houses of about 210 feet in length each, devoted to this purpose. At the time of the visit of your Committee, the vines in these spacious houses were covered with an abundant crop of fine fruit, just ripe, well colored, and of excellent quality; the vines were healthy, and everything about the establishment evidenced judicious and economical management, as well as skill and scientific attainment in this branch of culture, on the part of the proprietor. Mr. Strong also cultivates somewhat extensively forced nectarines and peaches. Of his success in this department of horticulture, as well as with grapes, the tables of the Society, at its weekly exhibitions, afford abundant evidence.

During the season, your Committee made brief and transient visits to a few other gardens; but of these a recapitulation is not, as it seems to them, required. And with the subjoined statement of their award of prizes and gratuities—the latter being permitted by the amount of money placed at their disposal in consequence of the withholding some of the prizes offered—they now close their Report.

For the Committee, Jos. S. Cabot, *Chairman.*
Massachusetts Horticultural Society, Boston, Dec. 3, 1853.

AWARD OF PREMIUMS BY THE COMMITTEE ON GARDENS, FOR 1853.

To Benj. V. French, for the most economically managed, best cultivated, and most neatly kept fruit garden,	$25 00
To John D. Bates, for the most economically managed, best cultivated, and most neatly kept grounds,	25 00
To M. H. Simpson, for the best managed, most economically conducted, and well kept grapery,	20 00
To W. C. Strong, for the same,	20 00
To Winship & Co., for their fruit and other gardens, for neatness, economical management, and good cultivation,	25 00
To Hovey & Co., for the best managed, most economically conducted, and well kept greenhouse,	20 00

REPORT OF COMMITTEE ON FLOWERS,

AWARDING PREMIUMS FOR 1853.

Pelargoniums.—For the best six varieties, in pots, to Hovey & Co.,	$8 00
For the second best, to T. Page,	6 00
Cut Flowers.—For the best display, to A. Bowditch,	3 00
For the second best, to P. Barnes,	2 00
Fuchsias.—For the best six varieties, to A. Bowditch,	6 00

For the second best, to M. P. Wilder,	$4 00
Cinerarias.—For the best six varieties, to A. Bowditch,	3 00
Heaths.—For the best varieties, to Hovey & Co.,	3 00
Greenhouse Plants.—For the best display, to M. P. Wilder,	15 00
For the second best, to Hovey & Co.,	12 00
For the third best, to T. Page,	10 00
For the fourth best, to A. Bowditch,	8 00
Tulips.—For the best thirty distinct varieties, to S. Walker,	8 00
Pansies.—For the best twelve distinct varieties, to P. Barnes,	4 00
For the second best, to J. Nugent,	3 00
Hawthorns.—For the best display, to Winship & Co.,	3 00
For the second best, to Hovey & Co.,	2 00
Hardy Azaleas.—For the best display, to Hovey & Co.,	5 00
For the second best, to J. A. Kenrick,	3 00
For the third best, to Winship & Co.,	2 00
Shrubby Pæonies.—For the best six varieties, to M. P. Wilder,	5 00
For the second best, to E. Chamberlain,	4 00
Herbaceous Pæonies.—For the best ten varieties, to M. P. Wilder,	5 00
For the second best, to A. Bowditch,	4 00
Pinks.—For the best six distinct varieties, to Hovey & Co.,	4 00
Roses.—Class I.—*Hardy Roses.* For the best thirty distinct varieties, to M. P. Wilder,	8 00
For the second best, to Hovey & Co.,	6 00
Class II.—For the best twelve distinct varieties, to E. Chamberlain,	5 00
For the second best, to A. Bowditch,	3 00
For the third best, to T. Page,	2 00
Class III.—*Hardy Perpetual Roses.* For the best ten varieties, to Hovey & Co.,	5 00
For the second best, to M. P. Wilder,	4 00
For the third best, to J. Nugent,	3 00
Prairie Roses.—For the best display, to Hovey & Co.,	5 00
For the second best, to J. Nugent,	4 00
For the third best, to Winship & Co.,	3 00
Carnations and Picotee Pinks.—For the best ten varieties, to Hovey & Co.,	5 00
For the second best, to Dr. C. F. Chaplin,	4 00
For the third best, to J. Nugent,	3 00
Hardy Rhododendrons.—For the best display, to Hovey & Co.,	5 00
For the second best, to M. P. Wilder,	3 00
Double Hollyhocks.—For the best twelve varieties, to P. Barnes,	5 00
For the second best, to Hovey & Co.,	4 00
For the third best, to E. Chamberlain,	2 00
Phloxes.—For the best ten distinct varieties, to P. Barnes,	6 00
For the second best, to Hovey & Co.,	4 00
For the third best, to E. Chamberlain,	3 00
German Asters.—For the best ten varieties, to A. Bowditch,	4 00
For the second best, to J. French,	3 00

For the third best, to J. Nugent, ... $2 00

Delphiniums.—For the best six varieties, to P. Barnes, . . 6 00

PREMIUMS AND GRATUITIES AWARDED AT THE ANNUAL EXHIBITION.

Plants in Pots.—For the best display, of not less than 20 pots, to J. P. Cushing, ... 12 00

For the second best, to Azell Bowditch, . . . 10 00

For the third best, to Thomas Page, ... 8 00

For the fourth best, to Hovey & Co., ... 5 00

Vase Bouquets.—For the best pair, suitable for the Bradlee vases, to Hovey & Co., the Bradlee plate, ... 10 00

For the second best, to Winship & Co., . . . 6 00

For the best pair of bouquets for the Society's vases, to J. Nugent, ... 10 00

Parlor Bouquets.—For the best round, for parlors, to Hovey & Co., first premium, ... 8 00

For the second best, to James Nugent, ... 6 00

For the third best, to M. P. Wilder, ... 5 00

For the fourth best, to Evers & Bock, ... 4 00

Cut Flowers.—For the best display, to Thomas Page, . . 8 00

For the second best, to Winship & Co., . . . 6 00

For the third best, to P. Barnes, ... 4 00

Coxcombs.—For the best 6 pots, to J. P. Cushing, first premium of . 3 00

For the second best, to Evers & Bock, . . . 2 00

Gratuities. *Bouquets.*—To Winship & Co., T. Page, B. B. Mussey, and W. E. Carter, $2 each. To Evers & Bock, $5.

Plants in Pots.—To Winship & Co., M. P. Wilder, J. Nugent, and Evers & Bock, $5 each. A. Bowditch, Double White Camellia, $3. T. S. Sullivan, for Testudinaria elephantipes, $1. To J. Nugent, for coxcombs, $2. N. R. Preston, fig tree, $1. J. Nugent, Japan pea plant, $1.

Designs.—To Miss Russell, $3 for a floral temple, and $2 for a floral basket.

To Miss M. A. Kenrick, for floral basket; Mrs. E. A. Story, for a basket, and C. S. Holbrook, for design of amaranths, $2 each. Messrs. Burr, for floral vase of grasses, and horn of plenty, $5 and silver medal.

To B. B. Mussey, for a basket, ... 1 00

To A. Bowditch, floral design, ... 10 00

To Mrs. W. Kendrick, for floral screen, ... 3 00

Cut Flowers.—To Hovey & Co., $3. J. Nugent, $3. Messrs. Burr, $3. Mrs. J. Heard, $1. C. Griffiths, $1. Dennis Murray, for dried ferns, $3, and native plants, $5. Miss Mary Fisher, $1. F. M. Howard, for verbenas, $2.

Dahlias.—Division A.—*Specimen Bloom.*—For the best flower, to Hyde & Son, ... 3 00

Various Colors.—For the best tipped, to Messrs. Burr, . . 1 00

For the best scarlet, to Hyde & Son, ... 1 00

For the best striped, to Hyde & Son, ... 1 00

For the best blush, to Hyde & Son,	$1 00
For the best dark tipped, to Hyde & Son,	1 00
For the best red, to A. Bowditch,	1 00
For the best scarlet, to J. Nugent,	1 00
For the best maroon tipped, to J. Nugent,	1 00
Division B.—Class I.—For the best twenty-four dissimilar blooms, to Hovey & Co.,	7 00
For the second best, to P. Barnes,	5 00
Class II.—For the best eighteen dissimilar blooms, to Hyde & Son,	6 00
For the second best, to J. Nugent,	4 00
Class III.—For the best twelve dissimilar blooms, to Hovey & Co.,	5 00
For the second best, to A. Bowditch,	3 00
HERBACEOUS PERENNIALS.—For the best display through the season, to Winship & Co.,	8 00
For the second best, to P. Barnes,	6 00
For the third best, to A. Bowditch,	4 00
ANNUALS.—For the best display through the season, to J. Nugent,	8 00
For the second best, to P. Barnes,	6 00
For the third best, to Messrs. Burr,	4 00
CAMELLIAS.—For the best twelve varieties, to J. Nugent,	8 00
FLOWERING SHRUBS.—For the best display, to Winship & Co.,	8 00
For the second best, to J. A. Kenrick,	6 00
BOUQUETS.—For the best display for the season, to J. Nugent,	5 00
For the second best, to T. Page,	3 00

GRATUITIES AT THE WEEKLY EXHIBITIONS.

To Hovey & Co., for calceolarias,	2 00
To Hovey & Co., for fuchsias,	3 00
To A. Bowditch, for calceolarias,	2 00
To T. Page, for cut flowers, $2, $1,	3 00
To Winship & Co., for cut flowers,	2 00
To E. M. Richards, for the same, $1, $4,	5 00
To R. M. Copeland, for hyacinths,	5 00
To J. Nugent,	1 00
To J. A. Kenrick,	1 00
To Miss Russell, $1, $12,	13 00
To M. P. Wilder, for superb azaleas,	5 00
To M. P. Wilder, for Gardenia Fortuni, &c.,	4 00
To J. Nugent, for *E*rìca ventricòsa supérba,	2 00
To Hovey & Co., for *E*rica Cavendishii,	2 00
To T. Page, for various plants,	4 00
To Hovey & Co., for seedling azalea,	2 00
To J. Nugent, for amaryllis,	1 00
To Winship & Co., for verbenas,	1 00
To P. Barnes, for cyclamen,	1 00
To P. Barnes, for Deutzia gracilis,	2 00
To E. Smith, for pansies,	1 00

To Hovey & Co., for splendid verbenas,	$1 00
To Hovey & Co., for ericas,	2 00
To T. Page, for Clématis Siebòldii,	2 00
To W. E. Carter, for Dodecatheon,	1 00
To P. Barnes, for Swainsònia Greyàna,	1 00
To Mrs. J. Heard, for seedling verbenas,	1 00
To J. Hovey, for bouquets,	3 00
To W. E. Carter, for cut flowers,	2 00
To C. Copeland, for splendid dahlias and roses,	10 00
To Mary R. Richards, for bouquets,	2 00
To J. Nugent, for seedling phloxes,	2 00
To B. Harrington, for native plants,	5 00
To Hyde & Son, for fine dahlias,	2 00
To D. T. Curtis, for pomegranate,	3 00
To J. Duncklee, for Magnolia glauca,	2 00
To J. A. Kenrick, for magnolias in variety,	3 00
To Miss M. A. Kenrick, for designs,	9 00
To Mrs. E. A. Story, for the same,	3 00
To R. C. Bell, for hollyhocks,	2 00
To A. Bowditch, for Cyrtocerus, fuchsias, &c.,	10 00
To W. Ashley, for columbines,	2 00
To Hovey & Co., for fine seedling Japan lilies,	3 00
To A. Bowditch, for camellias,	5 00
To B. V. French, for cut flowers,	2 00
To Col. B. Loring, for Prairie roses,	1 00

For the Committee, JOSEPH BRECK, *Chairman.*

REPORT OF THE COMMITTEE OF ARRANGEMENTS

FOR THE 25TH ANNUAL EXHIBITION.

The Committee of Arrangements beg leave to make the following Report:

The exhibition of the Society on the Common, under Mr. Wright's large pavilion, terminated successfully, not only in the rich display of fruits, flowers, and vegetables, which were without parallel in previous exhibitions, but also resulting in a pecuniary gain to the Society of four hundred dollars. The public, as well as the members of the Society, appear to have been well satisfied with the arrangement and comfort of the pavilion, and with its endless variety of horticultural productions.

Notwithstanding the fears entertained by some persons, that the Common would be injured by the erection of the tent, it was conceded by those opposed, that no essential harm was done to the ground. In a few weeks no traces of the injury could be observed. The Committee are much indebted to his Honor the Mayor and other officers of the city government, for the anxiety they manifested to promote the welfare of the Society, and to overcome the objections raised to prevent the use of the Common for this exhibition.

The most important item in preparing for this exhibition, was laying the floor, the erection of tables, stands, &c., requiring for the construction of the whole, about 50,000 feet of boards and joist. The Mayor and Aldermen would not give permission to use the Common for the occasion, without the agreement on the part of the Committee to lay a floor over the whole area of the pavilion, to preserve the grass from injury. The expense of lumber and labor, in laying the floor, amounted to $877. The lumber sold at auction for $440, making the cost $437.

The Committee are of opinion that, should it be found expedient hereafter to have a similar exhibition, a considerable saving might be made, by advertising for proposals to execute the work and furnish the lumber.

At the commencement of the exhibition we were visited by a severe rain storm, which falling very suddenly, penetrated the canvass and gave the fruit and flowers a thorough drenching. It resulted, however, in no great damage to the products on exhibition, except to the grapes and cut flowers, and rendering the place uncomfortably wet for a few hours, and in greatly diminishing the receipts at the door for that day. The weather for the remainder of the time was remarkably pleasant, and crowds of people thronged the pavilion, particularly in the evening, when the place, lighted with gas and enlivened by the band of music, seemed like a place of enchantment.

The Committee regretted the necessary termination of the exhibition nearly as soon as it was under good head-way, as the public had but just learned of the glory of the place when it was closed. Should there be another exhibition of the kind, we are of opinion that if it could be opened on Thursday, and kept open for a week or ten days, by allowing the contributors to renew the perishable fruits and flowers on Monday, a large sum of money would be secured to the Society. The risk of holding an exhibition under a tent would be greatly lessened, could there be more time between the opening and close; contributors of the perishable fruits and flowers could be remunerated by additional premiums for their products.

The whole amount taken at the door, was . . .	$2,124 50
Sale of lumber, ...	440 95
	$2,565 45

Sundry expenses of Exhibition, ...	$2,157 72
Cash paid Capt. Austin, Treasurer, ...	400 00
" for trunk for linen, ...	3 00
In the hands of the Chairman, ...	4 73
	$2,565 45

Should it be thought best by the Society to continue their annual exhibitions under a tent, the committee would suggest the propriety of exchanging their glass ware for a new set, having the name of the Society stamped on each article; and for this purpose funds should be solicited from individuals able and favorably disposed towards the society. The amount required would be about $2,000. From this sum would be deducted the value of the glass ware now owned by the society. In addition to the amount paid over to the Treasurer, there remains on hand the value of one hundred and twenty-five dollars in cotton cloth, which has been washed and calendered, and is now packed in three trunks, ready for another occasion.

The committee purchased also, from the funds in their hands, ten gross of vials, valued at $15 00, which, with the cotton cloth and trunks, are worth $150 00. The balance in the hands of the chairman (4 73) will be required for some small bills that have been made known since making out this report. For the Committee, JOSEPH BRECK, *Chairman.*

REPORT OF THE COMMITTEE ON FRUITS,

AWARDING PREMIUMS FOR 1853.

[The prefatory remarks of the committee extend to ten or twelve pages, and we are obliged to defer them to our next number.—*Ed.*]

For the best and most interesting exhibition of Fruits, during the season, the Lowell plate, to Hovey & Co.,	$20 00
For the second best, to J. F. Allen,	12 00
APPLES.—For the best twelve Summer apples, to Bowen Harrington, for the Williams,	6 00
For the next best, to J. W. Foster, Early Harvest,	4 00
For the best twelve Autumn apples, to Hill & Crosby, Hubbardston Nonsuch,	6 00
For the next best, to Josiah Lovett, Cole's Quince,	4 00
For the best twelve Winter apples, to A. W. Stetson, Baldwin,	6 00
For the next best, to Messrs. Burr, Jonathan,	4 00
APRICOTS.—For the best twelve, to Geo. S. Baxter,	5 00
For the next best, to Henry Vandine,	3 00
BLACKBERRIES.—For the best specimens, to Josiah Lovett,	5 00
For the next best, to Galen Merriam,	3 00
For the next best, to C. E. Grant,	2 00
CHERRIES.—For the best specimens, to Geo. Walsh, New Black Bigarreau,	5 00
For the next best, to J. B. Moore, Black Eagle,	3 00
For the next best, to A. Bowditch, Coe's Transparent,	2 00
CURRANTS.—For the best specimens, to Josiah Lovett, Gondouin Red,	5 00
For the next best, to Geo. Wilson, White Dutch,	3 00
FIGS.—For the best twelve specimens, to F. Tudor,	5 00
For the next best, to J. F. Allen,	3 00
GOOSEBERRIES.—For the best specimens, to Alexander McLellan,	4 00
For the next best, to J. W. Foster,	2 00
GRAPES.—For the best specimens, grown under glass, on or before the first Saturday in July, to Mrs. F. B. Durfee,	10 00
For the next best, to M. H. Simpson,	7 00
For the best specimens, grown under glass, subsequently to the first Saturday in July, to W. C. Strong,	10 00
For the next best, to J. F. Allen,	7 00
For the best Isabella grapes, to C. E. Grant,	5 00

For the next best, to Henry Vandine,	$3 00
For the best Diana grapes, to Diana Crehore,	5 00
For the next best, to Hovey & Co.,	3 00
Musk Melon.—For the best musk melon, in open culture, to A. D. Webber,	5 00
For the next best, raised by open culture, to E. M. Richards,	3 00
Nectarines.—For the best twelve specimens, to J. F. Allen,	5 00
For the next best, to Hovey & Co.,	3 00
Peaches.—For the best twelve specimens, grown under glass, on or before the second Saturday in July, to J. F. Allen,	6 00
For the next best, to M. H. Simpson,	4 00
For the best twelve specimens, in open culture, to T. Clapp, Early Crawford,	6 00
For the next best, to C. E. Grant, Early Crawford,	4 00
For the next best, to E. S. Rand, Jr., Coolidge's,	2 00
Pears.—For the best collection, not exhibited before this year, with a written description of the same, the Society's plate, to M. P. Wilder,	10 00
For the next best, to Hovey & Co.,	6 00
For the best twelve Summer pears, on or before the last Saturday in August, to J. B. Loomis, Rostiezer,	6 00
For the next best, to J. F. Allen, Manning's Elizabeth,	4 00
For the best twelve Autumn pears, on or before the last Saturday in November, to S. Driver, Beurré Bosc,	6 00
For the next best, to J. A. Stetson, Beurré Diel,	4 00
For the best twelve Winter pears, on or before the third Saturday in December, to W. R. Austin, Easter Beurré,	8 00
For the next best, to J. Plimpton, Glout Morceau,	4 00
For the next best, to Henry Vandine, B. D'Aremberg,	4 00
Plums.—For the best specimens, to Josiah Lovett, Green Gage,	4 00
For the next best, to Henry Vandine, Nectarine,	3 00
For the next best, to M. H. Simpson, Green Gage,	2 00
Quinces.—For the best twelve specimens, to Samuel Downer, Jr.,	4 00
For the next best, to C. E. Grant,	2 00
Raspberries.—For the best specimens, to Josiah Lovett,	5 00
For the next best, to Thomas Page,	3 00
For the next best, to Ezra Cleaves,	2 00
Strawberries.—For the best specimens, to J. B. Moore, Hovey's Seedling,	6 00
For the second best, to M. H. Simpson, Hovey's Seedling,	4 00
For the third best, to M. H. Simpson, Durfee's Seedling,	3 00

PRIZES AWARDED ON THE FIRST DAY OF THE ANNUAL EXHIBITION.

Pears.—For the greatest number of best grown varieties of named pears, at least three specimens of each,—the specimens to be at the disposal of the Chairman of the Fruit Committee, for two weeks,—to Hovey & Co., the Lyman Plate,	40 00

For the second best, subject to the same rules and conditions, to M. P. Wilder,	$20 00
For the greatest number of best grown varieties of named apples, at least three specimens of each—not awarded.	
For the second best, subject to the same rules and conditions, not awarded.	
Apples.—For the best twelve varieties, of twelve specimens each, to Messrs. Burr, the Society's Plate,	20 00
For the second best, to Josiah Lovett,	15 00
For the third best, to A. D. Williams,	12 00
For the fourth best, to B. V. French,	8 00
For the best dish of apples, twelve specimens of one variety, to Josiah Stickney, Gravenstein,	6 00
For the second best, to M. H. Simpson, 20 oz. Pippin,	5 00
For the third best, to Henry Vandine, Porter,	4 00
For the fourth best, to Geo. Everett, Baldwin,	3 00
Pears.—For the best twelve varieties, of twelve specimens each, to W. R. Austin, the Lyman Plate,	20 00
For the second best, to Josiah Richardson,	15 00
For the third best, to Josiah Stickney,	12 00
For the fourth best, to Hovey & Co.,	8 00
For the best dish of pears, twelve specimens of one variety, to Josiah Richardson, Flemish Beauty,	6 00
For the second best, to C. M. Brackett, Seckel,	5 00
For the third best, to Samuel Downer, L. B. de Jersey,	4 00
For the fourth best, to Samuel Walker, Dunmore,	3 00
Assorted Fruit.—For the best basket of fruit, to Azell Bowditch,	10 00
For the second best, to Samuel Walker,	7 00
Grapes.—For the best five varieties, two bunches each, to Mrs. F. B. Durfee,	12 00
For the second best, to W. C. Strong,	8 00
For the third best, to Breck & Son,	5 00
For the best two varieties, to Nahum Stetson,	6 00
For the second best, to B. D. Emerson,	4 00
For the third best, to Dr. Durfee,	2 00

The Committee also award to Messrs. Hovey & Co. the Appleton Gold Medal, for their new Seedling cherry, which has been exhibited for five years, and obtained the highest commendation of the Society.

GRATUITIES DURING THE SEASON.

To Josiah Lovett, for Minister apples,	4 00
To Hovey & Co., for Glout Morceau pears,	4 00
To T. D. Anderson, for Beurré d'Aremberg pears,	4 00
To J. B. Moore, for currants,	3 00
To I. Fay, for Jenny Lind strawberries,	3 00

GRATUITIES AWARDED AT THE ANNUAL EXHIBITION.

To J. S. Cabot, for a collection of pears,	$20 00
To Samuel Walker, for the same,	10 00
To Winship & Co., for the same,	10 00
To Henry Vandine, for the same,	10 00
To John Gordon, for the same,	4 00
To John Gordon, for a collection of apples,	6 00
To J. S. Sleeper, for fine pears,	5 00
To F. Dana, for the same,	4 00
To Dr. C. F. Chaplin, for the same,	4 00
To W. Bacon, A. D. Williams, and Henry Bradlee, each the Silver Medal, for collections of fine pears.	
To A. Parker, for fine pears, Van Mons Leon le Clerc,	3 00
To W. C. Strong, for a design for grapes,	10 00
To John Hill, for a design for peaches,	7 00
To J. M. Fessenden, for a design for grapes,	5 00
To Thomas Waterman, for the same,	5 00
To R. M. Copeland, for the same,	2 00
To C. J. Weinz, for Bartlett pears,	2 00
To N. Collins, for Collins pear,	5 00
The Bronze Medal to N. C. Poore, for grapes; to B. Hedge, for pears; to H. Kellog, for Seckel pears; to L. Wheeler, for L. B. of Jersey pears; to J. A. Stetson, for Flemish Beauty pears; to D. Roberts, for a collection of pears; to Evers & Bock, for the same; to H. S. Hills, for Bartlett pears; to R. W. Ames, for Merriam pears; to J. B. Loomis, for a collection of pears; to B. Harrington, for a collection of apples.	
To Mrs. E. A. Story, for Blood peaches,	5 00
To N. Collins, for the introduction of the Collins pear,	20 00
To Hovey & Co., for the introduction of their new native pear,	20 00

For the Committee, EBEN WIGHT, *Chairman.*

REPORT OF THE VEGETABLE COMMITTEE,

AWARDING PREMIUMS FOR 1853.

The Committee report the show of vegetables, during the season, to have been very good; although the quantity has not been great, the quality has been very excellent. At the Annual Show the display was good, and attracted much attention. In regard to the Davis Seedling Potato, it has, in the opinion of the Committee, held to its previous character. This season it has been repeatedly tried, drill and drill, with the Chenango and Peach Blow, and whilst the decay was great with them, the Davis was untouched by rot. The Committee have awarded the premiums and gratuities, a copy of which is annexed. An interesting communication has been received from Dr. T. W. Harris, of Cambridge, in which high mention is made of the Cuba and fine Hybrid Squashes, (cross of Marrow and Cuba,) raised and exhibited by A. W. Stetson, Esq., of E. Braintree, at the annual exhibition.

For the past four years Dr. Harris has given great attention to the examination of pumpkins and squashes, and now is able to report 10 varieties of the same group, Valparaiso, Cuba, and Marrow. Of the varieties mentioned particularly, is the Acorn Squash, which is evidently nothing but a variety of the one called Le Pepon Turban. Fine specimens were raised by him in 1851. He pronounces it the heaviest squash of its size, and the best flavored ever raised by him.

Asparagus.—For the earliest and best, to H. Bradlee,	$3 00
For the second best, to A. W. Stetson,	2 00
Beets.—For the best (pure blood beet,) during the season, not less than twelve roots, to Josiah Crosby,	3 00
Brocoli.—For the best three heads, to Josiah Lovett, 2d,	5 00
Beans.—For the best and earliest peck of string beans, to James Nugent,	3 00
For the second best and earliest Lima beans, to H. Bradlee,	3 00
For the best and earliest variety of shell beans, to Josiah Crosby,	3 00
Cabbage.—For the best Drumhead cabbage, during the season, not less than three heads, to A. D. Williams,	5 00
For the second best, to Josiah Crosby,	3 00
For the best Savoy cabbage, during the season, not less than three heads, to J. B. Moore,	3 00
Carrots.—For the best exhibited, to J. B. Moore,	2 00
Celery.—For the best and largest blanched, not less than six roots, to Josiah Crosby,	5 00
For the second best, to Bowen Harrington,	3 00
Corn.—For the best and earliest sweet corn, to A. D. Webber,	3 00
For the second best, to J. B. Moore,	2 00
Cucumbers.—For the best pair under glass, previous to the first Saturday of June, to H. Bradlee,	5 00
For the second best, to C. S. Holbrook,	3 00
For the best and earliest of open culture, to Josiah Crosby,	3 00
Egg Plants.—For the best display, to A. D. Webber,	5 00
Lettuce.—For the best six heads, before the first Saturday in July, to W. A. Harris,	3 00
For the second best, to J. B. Moore,	2 00
Potatoes.—For the best and earliest peck, to Josiah Crosby,	3 00
For the second best, to W. A. Harris,	2 00
Peas.—For the best and earliest peck in June, to J. B. Moore,	3 00
Rhubarb.—For the largest and best, previous to the first Saturday in July, to A. W. Stetson,	5 00
For the second best, to Galen Merriam,	3 00
Tomatoes.—For the best and earliest, to James Nugent,	3 00
Vegetables.—For the best display and greatest variety at the weekly exhibitions, during the season, to Josiah Crosby,	5 00
For the second best, to J. B. Moore,	3 00

GRATUITIES.—To Parker Barnes, for fine early rhubarb	$3 00
To Wm. Walsh, for fine hybrid cucumbers,	2 00
To Hyde & Son, for fine rhubarb,	2 00
To H. Bradlee, for Adams early corn,	2 00
To M. P. Wilder, for Myatt's Linnæus and Royal Albert rhubarb,	2 00
To Azell Bowditch, for Lima beans,	3 00
To Alvin Adams, for specimens of oats, wheat, and barley, from California, the Society's Silver Medal,	5 00
To Hill & Crosby, for Marrow squash,	3 00
To Wm. Barnes, for large pumpkins,	2 00
To R. C. Hooper, for turnip-rooted cabbage,	2 00
To W A. Harris, for fine early potatoes,	3 00
To J. B. Moore, for varieties of Sweet corn,	2 00
To Bowen Harrington, for Summer squashes,	1 00

PREMIUMS AND GRATUITIES AWARDED AT THE ANNUAL EXHIBITION.

VEGETABLES.—For the best display and greatest variety, first premium, to J. B. Moore,	10 00
For the second best, to Stone & Co.,	8 00
For the third best, to A. D. Williams,	6 00
For the fourth best, to B. V. French,	4 00
MAMMOTH SQUASHES.—For the best, to Jas. Dunn, the Silver Medal.	
For the second best, to A. W. Stetson,	3 00
GRATUITIES.—For a collection of squashes, to A. W. Stetson, the Society's Silver Medal.	
For a fine collection, first premium, to Hyde & Son,	5 00
Second premium, to Henry Bradlee,	3 00
Third premium, to B. Harrington,	2 00
For egg plants, best, to B. V. French,	1 00
For the same, to Parker Barnes,	1 00
For Lima beans, to J. B. Moore,	2 00
For a fine collection, to C. S. Holbrook,	3 00
For tomatoes, to Nahum Stetson,	1 00
For a fine collection, to James Nugent,	5 00
For the same, to Messrs. Burr,	5 00
For the same, to Stone & Co.,	1 00
For the same, to Josiah Stickney,	3 00
For the same, to A. D. Webber,	4 00
For pumpkins, first premium, to Thos. Page,	1 00
For potatoes, to C. A. Hewins,	1 00
For the same, to J. B. Moore,	1 00
For large pumpkins, to A. W. Stetson, Silver Medal; and for two extra Cuba squashes,	3 00
For squashes, to Hyde & Son,	1 00
To Charles W. Stone, for black Spanish melons,	4 00

For the Committee, HENRY BRADLEE, *Chairman.*

HORTICULTURAL OPERATIONS

FOR JANUARY.

FRUIT DEPARTMENT.

December, though very pleasant, has been a cool month, with the ground froze to the depth of four to six inches; the earlier part was, however, sufficiently mild to allow of the completion of the fall work, and get everything in order for the winter. A mild and cloudy month, though very convenient for working out, is far less favorable for indoor operations than such as we have just had. Artificial heat can be easily supplied, but artificial sunshine is something that cannot be obtained, and as all forcing operations are dependent upon an abundance of solar heat for good success, without it, at this dull season, but little progress can be made.

Grape Vines in the earliest houses, if everything has been carefully attended to, will be in bloom soon, and will require close attention. Keep up a good day temperature, but not too high at night; 55° should be the maximum. Tie in all the laterals as they advance, and top them beyond the fruit if growing too rapidly. Vines in the greenhouse will now be at rest, and will not start till the beginning of February.

Peach Trees, in pots, now introduced into the grapery, or greenhouse, will ripen their fruit in June. Such as are intended for a succession should be placed in some cool place,—in a shed or cellar,—where they will not be exposed to a very low temperature. Prune, wash, and put in proper order as soon as brought into the house.

Cherries, Plums, or other fruit trees, in pots or boxes, may be treated in the same way as peaches.

Fig Trees in pots should be pruned now, and if early fruit is wanted, introduce a few of them into the greenhouse.

Scions of fruit trees may be cut this month, and preserved in earth in a cool cellar or shed.

Seeds of Pears and Apples may be mixed with sand or earth, and kept in a cool, rather dry place, till the season of planting in March or April.

Employ all the leisure time now in preparing labels, stakes, &c., which will be wanted as soon as the spring opens.

FLOWER DEPARTMENT.

The fine, sunny weather of December has been exceedingly favorable for the greenhouse or conservatory. Usually at this season of the year the days are dull and cloudy, and good fires have to be made to keep up even a moderate temperature. This added to the want of a bright sun, usually causes a weak and unhealthy growth, which, if not properly counteracted by an abundance of air and good treatment, often injures or greatly destroys the beauty of the plants; but with such a sunny December, there was no need of excessive fires, and everything now looks as bright as when put into the house.

Now is the season to begin spring operations. Early potted plants are the best, and all propagation should begin as soon as possible, in order to finish it before spring is too far advanced, and time more valuable than now; success is also greater at this season than in the hot days of April and May.

PELARGONIUMS will now require attention; all the plants intended for early flowering specimens should receive their final shift, and have their shoots topped, and tied out to neat stakes; keep in a cool, airy place, as near the glass as possible, and water rather sparingly for a time.

CINERARIAS may now have their last shift into their flowering pots; young stock may also be repotted if they require it. Fumigate often, to keep down the green fly, which is exceedingly troublesome to these plants. If they once get too much headway, they will quite spoil the beauty of the specimens.

JAPAN LILIES, for the first bloom, should be repotted at once, and placed on a cool shelf, near the glass; water sparingly till the leaves appear above the soil.

ACHIMENES AND GLOXINIAS, for early bloom, may be shaken out of the old soil, and freshly potted. Place in the warmest part of the house.

CAMELLIAS AND AZALEAS, as soon as they show the least signs of growing, should be more freely watered. Impregnate the flowers if it is intended to raise seedlings.

FUCHSIAS should now be attended to. The old plants should be shaken entirely out of the old earth, and potted in good rich soil. Head in the branches nicely, and when they begin to break, select only such shoots as will make handsome plants, using the others for cuttings if more stock is wanted.

PANSIES in pots should now be shifted into a larger size, in good rich soil. Sow seeds for planting in the open ground in May.

OXALISES done flowering may be placed away on a dry shelf, and their place filled with Ixias, Sparaxis, &c.

STEPHANOTUS, ECHITES, and other choice climbing plants, should now be carefully repotted and pruned in. Place in the very warmest part of the house.

HEATHS will now require attention. Shift such as require it, and put in cuttings where an increase of stock is wanted.

ROSES may now be propagated from cuttings.

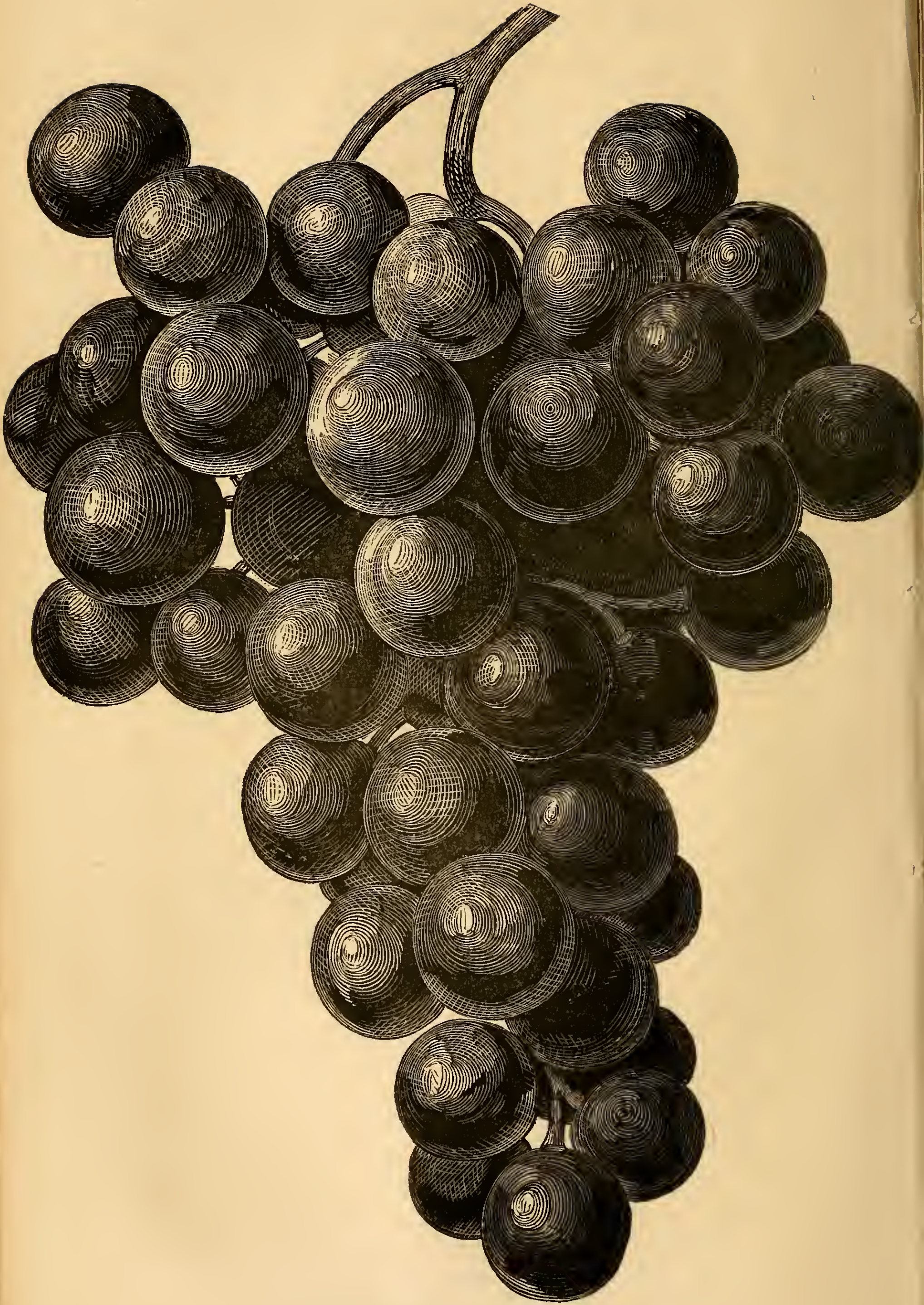
VERBENAS, SALVIAS, HELIOTROPES, &c., may now be propagated for a spring stock.

HYACINTHS potted in November or December may now be brought into the house to bloom.

CACTUSES should be sparingly watered now. Keep on a dry warm shelf, near the glass.

RHODODENDRON AND AZALEA SEEDS may now be sown in boxes, and brought forward in frames, in March or April.

Attend to the collection throughout. Top dress all plants that require it; tie up such as are crooked or straggling, and destroy all insects before they become too numerous to do it with any hope of success.



THE CONCORD GRAPE.

(Fig. 2.)

THE MAGAZINE

OF

HORTICULTURE.

FEBRUARY, 1854.

ORIGINAL COMMUNICATIONS.

Art. I. *The Trees and Shrubs of California and Oregon.*

Judging from the variety of trees in general cultivation throughout our principal towns and cities, the casual observer would suppose the United States were miserably barren of ornamental trees. Passing through any prominent nursery the same opinion would be formed. Row after row of Norway spruces, Scotch firs, Austrian pines, Scotch larches, Norway maples, English limes and Mountain ashes cover the ground; trees are imported by thousands and tens of thousands, and yearly the demand increases, and fresh importations furnish a supply. Without such a source to replenish as the English nurseries afford, our pleasure grounds would remain mere open pastures, and our gardens without shade or shelter.

"How is it," asks an enthusiastic planter, "that I cannot find a hemlock, a white cedar, or a Jersey pine among all the nurseries to put into my grounds; and while thousands of acres are covered with the rhododendron and kalmia, two of the most magnificent of all evergreen shrubs, why should I never meet them in our cultivated grounds; and still further, the fragrant Magnolia, the American holly, the Canadian yew, and the Prinos glabra, each of remarkable beauty, and all growing abundantly in our swamps and pastures, yet why is it that I have looked for them without success?"

The question is easier asked than answered. It is difficult to account for such a neglect of our own native trees and shrubs. The only solution we can give is, that growing abundantly and everywhere throughout the country, they were altogether too common to attract notice; and influenced as a taste for gardening has been, like other tastes, by fashion, it was necessary to discard those easily to be had, for such as were rare, or little known. To walk round a garden filled with hemlocks, rhododendrons, kalmias, magnolias, the fragrant clethra, and all the beautiful variety of our native woods and fields and hedge rows, would afford nothing for admiration, nothing for remark—they would be but common every-day things, and the offspring of a common uncultivated taste. But let the same grounds be planted with Norway spruces, lilacs, laburnums, daphnes, &c., and then how much praise would be elicited from the spectator; how fine the taste displayed in the arrangement, and how rare the knowledge that could gather from all climes the combined treasures of each!

Too long has fashion had her sway in landscape art. We see its effects in the long lines of ailanthuses which border the streets of some of our cities, making the air noisome by their profuse bloom, and bringing an otherwise beautiful tree into disrepute, from its too great abundance in confined places. We see it in the frequency of the elm,—unequalled among all trees, when judiciously introduced—which is planted to the exclusion of almost every other kind. We see it in many other objects in gardening art. It was the prevalence of fashion which that distinguished master of landscape gardening, Mr. Repton, had to contend with, and which retarded its progress, and rendered its practice difficult and often perplexing to its professors.

These remarks, though somewhat a digression from our subject, have been forced upon us in viewing the progress of rural art in our country. We are but just beginning to appreciate the importance of giving it more attention, and that proper direction which shall be guided by true taste, without being hampered or influenced by fashion.

It has been said by some that it is impossible to create in this country the effects produced by English landscape planters, for want of the variety of trees which they can employ in that milder climate. We are inclined to doubt this; indeed, we are certain that in the greater portion of our extended territory more striking, varied and grandly picturesque landscapes can be produced than in Great Britain. For wherever the Magnòl*ia* grandiflòra arrives at its gigantic growth, the climate admits of every beautiful shrub and tree of the temperate zone. But even in our colder northern latitude we are vain enough to believe that we can produce the finest effects with what hardy trees we may possess. The finest deciduous trees in the world are the magnolias, principally natives of our woods. "The grandest and most ornamental evergreen tree," says Loudon, "is unquestionably the cedar of Lebanon, and the most elegant and graceful, the hemlock;" the latter, one of our commonest species, and the former sufficiently hardy to grow in any part of New England. "The most extensive pine forests in the world, and the most gigantic specimens," says the same author, "exist in the United States."

The distribution of the *Coniferæ*, according to Loudon, is as follows: In Europe, *fourteen* kinds; in Asia, *nineteen* kinds; in North America, *forty* kinds; eighteen in the United States, and twenty-two in California and Oregon. Thus showing that we possess more than one-half of all that had been introduced up to 1838. At least twenty-five of these are perfectly hardy in the latitude of 42°, and probably all but four or five will prove to be so when fully tried.

The disparity in the number of Evergreens we now cultivate, and the above list, is great indeed, and the question arises, why have they not been introduced? We leave others to answer, while we proceed to put a more important question: "Shall no effort now be made, with the present facilities of rapid communication with the Pacific coast, to speedily introduce the magnificent trees of that fertile portion of our country; or shall we rest contented with what we find immediately around us, and leave the introduction of the arboricultural treasures of that region to the energetic and enthusiastic collectors of Great Britain, satisfied to get them at enormous prices from that country, after they have been reared by the care and attention of her intelligent cultivators?" To this we would like a speedy reply. And if, as we believe there is among our amateur planters and nurserymen, the least national pride or desire to accomplish so important an object, they will respond in the heartiest manner, and take some immediate measures to set about it. We know of one gentleman whose zeal is unabated in the introduction of every hardy tree or shrub, and who already possesses a large collection of fine specimens, and he has sent us the following note, to show how desirous he is of making some effort to retrieve the want of taste which we have shown in so long neglecting this subject. It is as follows:—

MR. HOVEY,—

Dear Sir—Very few persons seem to be aware of the extent, variety and beauty of the trees and shrubs scattered over the Western territory of the United States, from the Rocky Mountains to the Pacific Ocean. It is humiliating to know that Europe is far better informed than we are upon this subject, and that seeds and plants of every oak, evergreen and shrub, peculiar to that country, have been sent to England, and are now in process of successful culture. It seems to me that it is high time we should bestir ourselves in this matter, and that a collector, whose knowledge and integrity can be relied upon, should be sent out to Oregon and California, for the purpose of obtaining seeds and plants.

It has occurred to me that this might easily be accomplished by associating a few persons who would be willing to contribute towards the expense, leaving the details of the arrangements to yourself, as to the person to be selected, and the disposition to be made of what the collector may obtain. If you will start the thing, you may put my name down as one, and I will cheerfully subscribe one hundred dollars towards it; or double that sum if necessary. No time should be lost in getting the funds, and in despatching the proper person.—*Truly yours*, R. S. F. *Boston*, *Jan.* 3, 1854.

Our correspondent will have the thanks of every lover of fine trees for his liberal offer, and we think we do not underrate his enthusiasm when we say that no reasonable amount on his part shall be wanting to secure a successful result. For our own part, we heartily second his movement with another *hundred* dollars, and appeal to all our friends to make known to us, at once, their views, and the aid they will give to the undertaking.

We have no fears that a proper sum cannot be raised ; the only trouble will be to procure an able, intelligent and enthusiastic collector, on which the success of such an expedition will depend. But we believe it can be done. It will then only be necessary to organize an association of the subscribers for the receipt of the seeds and plants, and their distribution among those who have contributed towards its expenses. Thousands of seeds could be sent home the ensuing autumn, and in a year or two our nurseries might be stocked with a collection of the most magnificent trees of which the world can boast. Even the acquisition of the *A*'bies bracteàta, (described in another page) or the big Arbor vitæ, would almost repay the expense of a short expedition.

We invite all our friends to consider this important matter, and give their aid in its accomplishment.

ART. II. *Rural Cemeteries.* By WILSON FLAGG.

(Concluded from Vol. XIX.)

IF we should carefully study our own emotions, and their causes or origin in what we read, hear or examine in the various works of art, we should soon discover what is true and what is false taste. Each perfect individual is a representative of his race, and it is only necessary that he should know himself to be acquainted with human nature : it is only necessary that he should learn what pleases or displeases himself, to understand what would please or displease others, under the same or similar circumstances. But if we neglect the study of our own feelings, and allow ourselves to be guided by what we suppose to be public sentiment, we may be led by an ignis-fatuus, which is often something entirely different from what it seems to be. Thus men will sometimes run after a book which nobody can read, because each one thinks it has received universal approbation;—though every man who ever purchased one did so by the recommendation of an extraordinary puff in a fashionable Quarterly, which was paid for by the publisher of the book, and written, without sincerity, by a particular friend of the author. If the phantom which is called public opinion was a genuine representation of what it professes to be, it would be wise to be, in some measure, guided by it. But as it is a little more likely to be a false representation than a true one, it is safer to study the true public opinion by consulting the private views of our acquaintance, and our own feelings.

A French writer, who is treating of musical taste, remarks: "What little originality there is in France is to be met with only in those classes who are too ignorant to imitate. The opulent classes learn from the journals, every morning, what opinions they are to hold. They appear not to know whether they like a thing or not; they must know what is thought of it at Paris." In America every man learns what opinions he is to hold by studying the views of the public—views which, in the majority of instances, originated with the dictum of some interested leader of fashion, who did not so much as to give any body's opinion, not even his own. I believe we are all, who have been similarly educated, affected alike by similar objects. The degree in which different people are affected differs; but the character of their emotions, produced by similar facts and objects, is nearly the same in all. If a certain object excites ridicule, indignation, admiration or disgust in the mind of one beholder, it would produce the same emotion, in a greater or less degree, in the mind of another. The reason why so much false taste prevails is, that people conform to what they believe to be public taste, instead of being governed by their own feelings. What is done by one who occupies a position that makes his example the law of fashion, or his word the rule of taste, is done by the majority, perhaps by the whole. In the end, the whole public dislikes the public taste; but every one conforms to it, in opposition to his own feelings, because he does not like to stand alone.

When we are walking in a rural cemetery, it would be instructive to note the different emotions with which we contemplate the various monuments that greet our sight, and the remarks which we are prompted to make to those who are in company with us,—I mean what we think and feel, and not perhaps what we utter. For all men, when engaged in conversation about any matter, concerning which but one opinion seems to prevail, are more or less insincere, in what they say, of their own accord, and in what they reply to the remarks of others. Some do not like to utter sentiments that would offend, others do not like to appear unamiable and carping in their criticisms, and the majority are desirous of being in fashion. This remark is particularly applicable to our general conversation respecting rural cemeteries, and to our criticisms upon the objects contained in them. They are both fashionable and popular. The purpose of such grounds is sacred, and commends itself to all who have any religious feeling or moral sensibility. No man is entirely wanting in these sentiments, and the rural cemetery seems, to all, well calculated to cherish them, and to preserve a proper reverence for the dead.

While strolling among the various objects in these consecrated grounds, we are alternately affected by different and even opposite emotions. We view this monument without any particular feeling, except one that may prompt us to say to ourselves, "How much money has been lavished here. The builder must have been either a very rich or a very foolish man!" We pass on to another, in which we behold an indescribable something that affects us with a sensation of the ludicrous, or with perhaps a feeling of indignation. There is something that savors of vanity in the style of it, something that suggests an idea of the sinister character of the proprietor for whom the artist designed it. We may be unable to point out the particular style or ornaments that produce our dislike. Ostentation is nevertheless the prevailing expression, and we leave it with a feeling of contempt for the owner. The same emotions are probably felt by almost every intelligent person who views the monument. Yet there is only now and then an eccentric individual who ventures to utter his real opinion about it. Others are either diffident of their own judgment, or are afraid to differ from what they suppose to be public opinion. Thus are the whole community often governed by a delusion, and a bad taste appears to prevail, because no man dares to deviate from a certain standard which falsely represents public sentiment.

We next arrive at a monument that suddenly awakes all our sympathies, that causes us to feel an interest both in the history of the one who lies below, and in the mourner who erected the stone. We do not think of its artistical merits, nor of the wealth, nor the taste, nor of the modesty or vanity of the owner. We think only of the dead as a subject of regret, and of the mourners as objects of sympathy; or something in its appearance awakens a tender sentiment of melancholy, or fills the mind with a deep religious solemnity. All this is the effect of the style of the monument. It produces the effect which ought always to be studied, but which is the most difficult to be produced. Genius is required for this; or that combination of feelings in the builder of the monument that causes him to think only of the beloved one who is dead, and not of the display either of his wealth or his affliction.

Perhaps the most interesting graves are those which are without a stone. What is more picturesque than a little hillock, rising up among the herbage, without a stone, that marks the tomb of an infant! And how easily might this picturesque effect be destroyed by a few of those accompaniments which vanity or bad taste may have suggested to the surviving friends to pile up around it. At the sight of the simple hillock, we say—how often has this little grave been watered by the tears of some poor mother, who wept the more, because her tears were all the gift she had to bestow upon the grave of her beloved and lost! To render it impressive in the highest degree it should be, if not alone, where few others rest. Our sympathies are lost in a crowd. The grave should be simple and unadorned, to emblem the innocence of the little slumberer. I have seen the sculptured images of two lambs reposing on a slab of marble, placed over the grave of two infants, with a very pleasing effect. They symbolized the innocence of the babes, without any offensive ornaments or conceits.

Splendor vulgarizes every scene that is intended to awaken the sentiment of melancholy. Artificial decorations, even when consisting only of flowers, if not arranged with extraordinary skill, mar the simple beauty of a grave, and rob it of its sacred influence. Yet there are delightful emotions often excited by an appropriate and expressive monument. The stone that marks the resting place of one who was beloved and innocent in life, becomes to the mind a symbol of all that is divine in our natures. From the same source comes the pleasure we feel from the perusal of an epitaph enumerating the virtues of some humble friend of humanity.

Our ancestors marked the place where their dead reposed by two slabs of dark-colored slate or free-stone, whose sombre hues were in harmony with the solemn character of the grounds. Some of their inscriptions were ludicrous attempts to be pathetic, and the emblems engraved upon their head-stones are often grotesque and revolting. The inscriptions on modern tombstones are more appropriate; but the slate and the free-stone used by our predecessors seem to be better adapted to their purpose than the white marble used at the present day. Let there be ever so much simplicity in the style of the monuments and head-stones, the glitter of the white marble greatly injures their impressiveness. Whether the feeling is innate or the result of education, all men associate a white color with gaiety and cheerfulness. Light is cheerful, darkness is gloomy. For the same reasons, white is cheerful and black is gloomy. Yet black would be as much out of place in a grave-yard as white. Neither of these colors is adapted to produce picturesque effects; black being too nearly associated with gloom, and white with gaiety. The intermediate shades between white and black—those neutral tints with which nature embellishes her own ruins—these are the proper tints for a sepulchral monument.

When we enter a grave-yard we desire to be impressed with cheerful but solemn thoughts. This is a feeling common to all, and not peculiar to religious people. The objects and decorations introduced into such a place ought, therefore, to harmonize with the feelings we are disposed to cherish. If the monuments were black, as the slate-stones were once painted, and disfigured with frightful emblems of death and of our state hereafter, the mind is filled with disgust, and we turn from the scene as we would turn from the mouldering relics that slumber beneath them. If, on the other hand, the monuments are all of white marble, and the grounds are decorated as we would decorate a scene of fashionable amusement, the place loses its solemnity, and serves but as a theme of satire.

There is in some of these grounds an affectation of simplicity which renders the want of true simplicity only the more apparent. A very costly monument of white marble is erected without elaborate ornaments, with the simple name of the owner, and the names and the ages of those who are buried beneath it. But there is a manifest attempt, in the costly slabs and pillars of marble, that are piled up to the skies, to suggest to the spectator that the owner is one of the wealthy princes of the land; the result is a sort of barren exhibition of pride. There are ornaments which are simple and picturesque, and there is a plainness which is ostentatious. Wherever ostentation is very apparent, it becomes ludicrous, especially when it affects simplicity.

The principles of taste are the same in all the arts, and in all their applications. The rules that apply to the ornaments about a garden apply also, modified by the different character of the place, to a rural cemetery. A monument, like an ornamental object in a garden, should be expressive, not expensive; or if expensive, its costliness should not be conspicuous; it should be apparent only to those who are connoisseurs in the materials of which it is constructed. All ostentation of wealth is offensive, especially in a cemetery, where, of all situations in the world, it seems most out of place. Even in a dwelling, in the city, the beauty of the architecture produces a better effect, if its costliness is not apparent. There are persons who think otherwise, and who labor to make their cheap houses wear the appearance of great cost. A little reasoning on the origin of our agreeable sensations would convince them of their error. Vanity is a despicable trait in the human character, and the manifestations of it always gives offence.

In designing the objects for a rural cemetery, it should be the aim of the artist to minister to those feelings which are in unison with the character of the place. A coxcombical preacher may gratify his own vanity in a higher degree, by showing off the elegance of his person and gesture ; but he would serve the purposes of a rational ambition more effectually by studying to produce that effect on the minds of his hearers, which would increase their love of virtue, and their reverence for the precepts of religion. If I wished merely to attract public attention to a monument, without regard to the kind of feelings with which spectators would view it, an exhibition of costliness might serve my purpose. But what advantage would be gained by it? People would not look upon it as a proof of my liberality. It is notorious that the most selfish men are often the most extravagant in the sums they expend on a piece of ostentatious folly. The most avaricious men in the community are fond of erecting expensive houses. A true miser would prefer a hovel for his dwelling. But there are selfish men in the world who are not misers, who freely give their thousands to gratify an ambition for displaying their wealth, who are still niggardly towards their hired laborers, and who exhibit no private benevolence.

If the citizens of a certain place erect a monument over the grave of one who was an unquestionable public benefactor, this simple fact produces more effect on the mind of the spectator than anything else about it, if it be plain and appropriate in its style. We feel a reverence for the dead, for whom it is intended, because we here see the evidence of his goodness, and of his services to his fellow-men. It is the record of this fact, and this testimony of his virtues, that produce the principal effect. It is not merely the style of the monument, erected over his remains, that excites our reverence for his character; yet the style of the monument may harmonize or it may clash with this feeling. To produce the one effect and to avoid the other, should be the object of the designer, who should constantly bear in mind, that it is the evidence of the worth and virtues of the deceased, more than any other circumstance, that yields a charm to the spot and its accompaniments. If the monument shows a great lavishment of expense, the question arises whether the individual commemorated was so much greater than those who slumber around him? The effect of such extravagance is to lessen our respect for the dead by exciting invidious emotions. If the monument is mean and inelegant, the mind is diverted by thinking of the niggardliness of those who, while they joined to honor the deceased, should grudge the expense necessary to render it decent and appropriate. The style of it ought to be that of simple grandeur, betraying no desire to exhibit great costliness, and no endeavor to avoid a reasonable expense.

For a monument erected over the grave of a private person, designed merely as a tribute of affection, and to memorialize the virtues of the deceased, and one's own sorrows, a different style is required. For this purpose one should draw from his imagination rather than his purse. Some beautiful emblem should express our affection for the dead, and be the memorial of their life. A simple urn, with an appropriate inscription, would awaken more interest in the mind of the spectator than the proudest pile of marble. Nothing that is truly poetical would excite contempt, though it be the least expensive object in the grounds. A certain costliness in a monument erected to a public benefactor, which is very appropriate, would seem ridiculous and ostentatious in one erected over the grave of a private citizen. This principle is too apt to be overlooked by designers. But as a cemetery is filled chiefly by private tombs, the style of the monuments placed over them is the principal consideration in embellishing these grounds.

The figures most in use in monumental sculpture are the cross, the obelisk, the scroll, the urn, the broken column, the slab, the altar and the tablet. A very common design is a sort of an altar, with an urn placed upon it. The epitaph is usually inscribed upon the sides of the altar, and not upon the urn. This is what we commonly see in those family pictures which are used as memorials of the dead. A weeping willow hangs its branches over the monument, and the figure of a female, in the attitude of grief, is leaning on the opposite side.

In Pennant's Tour in Wales, there is an account of a monument, erected in a chapel, in which "the figure of Hope reclines on an urn, and is attended with her usual emblem of an anchor. A serpent with its tail in its mouth, expressive of eternity, includes the inscription on one side of the pedestal." The objectionable part of this design is the serpent with its tail in its mouth, which is one of the most absurd of all emblems, and could not fail to disgust every man of cultivated taste.

"The church-yards in Switzerland (says Simond) are adorned in an odd taste, with fantastic crosses on each grave, tricked out with small puppet figures of saints or angels, dangling loose in the wind, the wood curiously carved with devices, and the whole gaudily painted and gilt. Two leagues from Berne, we stopped to see a tomb of another sort—the celebated monument of Maria Laughans. The lid of the tomb is represented as breaking asunder, at the sound of the trumpet of the day of judgment; and a young and beautiful woman, pushing away the fragments with one hand, rises out with an infant on her arm. There is a great deal of sweetness in her face, mixed with a certain expression of surprise and yet of faith. But the action is hardly simple enough for the chisel."

Every one must be struck by the want of simplicity in this design, in the introduction of an allegory, which is an extended emblem, or rather something emblematical of incidents or events. Over a tomb we want a simple emblem, not an allegory; a sentiment, not a sermon. The figure of the mother and her child, as Simond remarks, would be better without the trick of the broken tomb. The idea would be proper enough for a painting; but it is too complicated for sculpture.

Such representations do not suit the taste of the more intelligent of the present age. The more cultivated the people, the more do they study general effects in their designs, and the less do they admire such conceits as those above described. The old world is full of them. It remains for America to set the example of a new and better taste to the rest of the world, instead of blindly imitating absurd customs which ought to have become obsolete with the superstitions and fallacies of the age that created them.

In my present and former remarks on Rural Cemeteries, I have confined myself to the advocacy of certain general principles, and have, for the most part, avoided criticisms upon the particular objects contained in our own grounds. The latter might, in many instances, seem invidious, and could seldom be entirely just. The cause of more than half the extravagance and absurdities that prevail in the style, both of our sepulchral monuments and of our dwelling-houses, is the propensity among our people to imitate foreign models, indiscriminately, instead of setting up a standard of taste for themselves, and adapted to their own circumstances and institutions. The surest method of reforming public taste is, it seems to me, to use our best efforts in finding out and establishing general principles; after which, the difference in the manner of carrying them into practice would give rise, not to discordant details, but to a picturesque and charming variety.

Beverly, January, 1854.

This communication completes Mr. Flagg's article on Cemeteries, the first part of which appeared in our last Vol., (XIX, p. 486.)

Art. III. *Description and Engraving of the Concord Grape, a new Seedling, raised by* E. W. Bull, *Concord, Mass.* By the Editor.

The grape is one of the most grateful and delicious of all fruits. From the days of Noah, "who planted vineyards," the vine has been the most universally-cultivated of all fruit-bearing plants. The promised land was a "land of wheat, and barley, and vines." Throughout the Bible, the vine is represented as the emblem of fruitfulness and plenty, yielding, as it does, at an earlier age, and in a profusion far beyond any other fruit. Its growth extends over 30 degrees of latitute on the Eastern continent—from Persia to France; and to such an extent has its culture increased, that, according to Chaptal, the quantity of wine produced in the latter country, as long ago as 1819, was 600,000,000 imperial gallons, and now exceeds a thousand millions. To whatever extent other fruits may have been cultivated, they bear no proportion to that of the vine. From one single species have been produced all the varieties which make up the European collections, now numbering more than three hundred sorts. A greater portion of these are wine grapes, not more than fifty varieties being retained by English cultivators as worthy of cultivation for the table.

But as much as the grape is esteemed,—that is, the superior varieties of foreign origin,—and as extensively as it has been cultivated in Europe, we have been and still are unable to grow it in our own climate, except by artificial means. Repeated attempts to raise it, both in a smaller and larger way, have all resulted in the same manner—a complete and total failure, unless in the confined yards of our thickly-crowded cities, and its out-door growth has been mostly abandoned.

In anticipation of such a result, our cultivators long since turned their attention to our native vines, which grow spontaneously, and in great variety, all over the United States, comprising several species. Rough, foxy, and unpalatable as most of them are, compared with the French table grapes, they had to raise these or none. Those of our northern region were found to be very indifferent, but the observation and attention of intelligent cultivators at the South soon enabled them to seek out and select varities which possessed the greatest merit. Among these, the Isabella and Catawba were the first to attract any particular notice; the former a native of South Carolina, and the latter of Georgia. Their introduction gave a new impulse to the growth of the grape everywhere. The Isabella proved to be not only a very excellent variety, but hardy enough to endure the climate of the New England States. No fruit ever became more rapidly extended. Every individual who had a rod of ground procured an Isabella vine; and, from its first introduction in 1819 to the present time, it has been the only variety, with the exception of the Diana, worth growing in the Northern and Eastern States. In the Western and Middle States, where the Catawba will ripen, that is the best grape, and it has superseded the Isabella, especially for the manufacture of wine.

But in the New England States, and the parallel north of 42°, the great desideratum has been a table grape of superior quality, sufficiently early to ripen in all seasons. The Diana, but very recently introduced, has, to a certain extent, supplied this; it will ripen its delicious fruit in all places where the Isabella fails, and will eventually take the place of that somewhat uncertain variety, ripening thoroughly not more than two seasons out of five. But something earlier even than the Diana is yet wanted; one that will ripen early in September, a free grower, perfectly hardy, of large size, of fine quality, and producing an abundant crop. All intelligent cultivators have felt the necessity of such a grape, and have been confident that a few years would bring about the result.

Long ago impressed with the opinion that our native grape was capable of being greatly ameliorated and improved, through the seeds, Mr. E. W. Bull turned his attention to their production, and now has growing more than 2000 seedling plants, from some of which he hopes even to beat himself. It will take a long time to prove them all, but the result cannot be otherwise than important: for the natural habit of the vine once changed or broken, variation takes place in such a manner that no opinion can be formed of the product. His success in raising the Concord Grape is the best proof of this.

Mr. Bull has given a brief history of his new variety, and it will be noticed that he calls it a seedling from our native grape of the second generation. It is this: some years ago he found a chance seedling growing upon his grounds near a wall; as there are no wild grapes in the near vicinity of his place he removed it to his garden, where he watched it with some care, and gave it good cultivation. In a year or two it produced a few bunches of fruit, ripening as early as the last part of August, and remarkably sweet and free from the foxy flavor of the wild type. The idea at once occurred to him that another generation would be a still greater improvement, and a parcel of seeds was saved for planting. His anticipations have been fully realized; the Concord Grape was the produce of these seeds. We annex Mr. Bull's account of the origin of his vine, with an accurate engraving of the bunch. *(Fig. 2, see Frontispiece.)*

Dear Sir;—I send you the history of the Concord Grape, which you desired for your excellent Magazine. I have by no means said all that can be said for it, my desire being to have it come fully up to the expectations of those who may cultivate it, which I have no doubt it will.

I believe I have before stated to you that my vine is growing on a poor sandy loam, overlaying gravel, which has not been trenched and but slightly manured; add to this, the late spring and early autumn frosts, which we are liable to in this deep valley of Concord, and the summer droughts which are very severe with me, and I think you will conclude with me that it will be likely to keep up to its character under almost any circumstances.

And here let me say that I have cultivated the Isabella, and many other kinds of grape, for fifteen years without being able to ripen them in open culture, and it was this constant failure which led me, about ten years since, to raise seedlings from our native grapes, in the hope that I should obtain a hardy grape that would give me a sure supply for my table. In this I have succeeded beyond my expectations.

The Concord Grape is a seedling, in the second generation, of our native grape, and fruited for the first time four years since, being at that time the only seedling I had raised which showed a decided improvement on the wild type.

Notwithstanding its unfavorable position, it has proved a great grower and bearer, and very constant to its quality and season. The seedling from which the Concord was raised grew near to a Catawba, and, it is quite possible, was impregnated by it, it having the flavor of that variety. The parent vine was a good and sweet grape, large, black, and ripe the 20th of August.

The Concord Grape, as I said before, is a strong grower; the wood strong, the foliage large, thick, strongly nerved, with a woolly under-surface, and has never mildewed nor rusted under any vicissitudes of weather.

The grape is large, frequently an inch in diameter, and the bunches handsome, shouldered, and sometimes weigh a pound. In color it is a ruddy black, covered with a dense blue bloom, the skin very thin, the juice abundant, with a sweet aromatic flavor, and it has very little pulp.

It ripens the 10th of September. The first ripe bunch of the season was exhibited at the Massachusetts Horticultural Society's Room, on the 3d of September, 1853. The vine was neither pruned nor pinched, nor had application of any of the horticultural arts, whereby precocity and size are attained, my object being to ascertain what would be the constant habit of the vine. I suppose that its quality would be much improved in a more favorable climate, and that its superiority to the Isabella would be as apparent under such circumstances as it is here.

The great want of the country in this latitude is a good table and wine grape, which shall also be early, hardy, and prolific. The Concord Grape fulfils these conditions, and I feel a sincere pleasure in offering it to my countrymen.—*Respectfully yours*, E. W. Bull. *Concord, Mass., January*, 1854.

We have said nothing about its qualities as a wine grape. Mr. Bull, however, exhibited some specimens of the wine made from his grape, which were tasted by the committee, and pronounced by them to be of a very excellent quality. It was his first attempt at wine-making, and of course not likely to be made with much skill. It has been much praised by several who have tasted it, and some of the persons good judges. It has a good body, with an agreeable, fruity perfume, and is particularly grateful to the sick, which Mr. Bull considers the best test it could have. It did not have the slightest addition of spirits, but was the *pure juice of the grape.*

We close our account of the Concord Grape with a more full description.

Bunch, large, long, neither compact nor loose, handsomely shouldered: *Berries*, roundish, large, three quarters of an inch in diameter, sometimes measuring an inch: *Skin*, thin, very dark, covered with a thick blue bloom: *Flesh*, very juicy, nearly or quite free from pulp: *Flavor*, rich, saccharine, and sprightly, with much of the delicious aroma of the Catawba: *Vine*, very vigorous, making strong wood: *Leaves*, very large, thick, strongly nerved, not much lobed, and woolly beneath.

Art. IV. *Floricultural and Botanical Notices of New and Beautiful Plants, figured in Foreign Periodicals; with descriptions of those introduced to, or originated in, American Collections.*

Abutilon insignis.—This new and very beautiful abutilon, the handsomest of the family, will soon be in bloom in our collection. It is quite unlike any of the older kinds, the flowers being crimson, veined with white. The habit and foliage is also good, and it appears to be a free bloomer, as the plant is covered with flower-buds. It will be a great acquisition.

New Striped-leaved Dahlia.—Van Houtte, of Belgium, offers for sale a great novelty in the way of a striped-leaved dahlia, which is called Emperor Francis Joseph 1st. It was raised by M. Roezl, of Austria, in the park of the Comte de Schœnborn, near Vienna. The leaves are large, deep green, striped with white, very constant, not a single one being unicolored. The flowers are also very double.

New Gladioluses.—The French cultivators have raised quite a number of new varieties of the Gladìolus gandavénsis. Some of them we have flowered in our collection, but the greater number are yet not introduced. A variety called Ulysses, is as brilliant as the old cardinàlis. They will all be very desirable, as they bloom freely under common garden culture in the open ground.

Flowering of Littæ̀a geminiflòra.—That curious and rare plant, Littæ̀a geminiflòra, or the plant that has been confounded with Bonapárt*ea* júncea, but which is now found to be a totally different plant, has been flowering here two months, and is likely to continue flowering two months longer. The flower spike is eleven feet in height. I cannot state the age of the plant, but when I came here as gardener with Mr. Manice, ten years ago, it was nearly as large as it was when it began to bloom. This is the first time I have heard of its blooming in this country. I should like to have shown you a fine plant of Phaius grandiflòrus that we have had in bloom here, with thirty flower spikes, some of the spikes having more than twenty-five flowers upon them—it is a most splendid plant.

Stauntòn*ia* latifòlia, and Abèlia triflòra withstood the cold of last winter, (1852–53,) planted out in the open ground.—*Yours truly,* R. Parnell, *Gardener to D. F. Manice, Oatlands, L. I.*

New Herbaceous Pæonies.—M. Van Houtte offers for sale several new and splendid pæonies, raised by M. Parmentier, of Enghein. The collection was offered at public auction last June, and brought together the elite of the amateurs and cultivators of Europe, who were anxious to possess his fine varieties, the fruits of forty years spent in producing seedlings. Nearly all the varieties are of a remarkably dark color, and attracted the admiration of all who attended the sale, which took place just in the season of bloom. M. Van Houtte states that he had to make great exertions to obtain the stock, but with a golden price *(prix d'or)* he triumphed over his competitors. The following are the names of some of the best: Alex. Verschaffett, Doyen d'Enghein, Eclatant, fúlgida, Lamartine, Sultan, Louis Von Houtte, Prince Charles, &c., in all thirty varieties.

New Achimenes.—Quite a number of new varieties of this popular and beautiful flower have been produced by the French and Belgian cultivators. A new species has also been introduced which surpasses all that have heretofore been seen. Van Houtte thus speaks of it: "Achimenes chirìta. Precious acquisition! The flowers of this beautiful species are as large as those of the Gloxinia and of the color of the Pansy, being of a fine blue on the exterior, reddish on the inside. Its habit is similar to that of the Chirìta Moòn*ii*, introduced into Europe from Mexico."

233. A'bies bractea'ta *Nuttall.* Bracteated Silver Fir. (Coniferæ.) California.

*P*inus bracteata, Don. and Lambert.

This is one of the "most remarkable of all the true pines, particularly in the nature of its cones," and has long been a desideratum with the English cultivators. It has at last been introduced, and Messrs. Veitch, of Exeter, have a stock of young plants. It is a California species, growing with the Taxòdium sempervìrens, and at a higher elevation, and covering large tracts on the mountainous range running parallel with the coast, to the Andes of St. Lucia, where Dr. Coulter first discovered it. Douglas afterwards met with it at an elevation of 6000 feet, on the California mountains, in latitude 36° north; but both of these botanists failed to obtain seeds or plants. Nuttall also found it in his journey to the Pacific coast, and figured it in his splendid work supplementary to Michaux's. Its introduction to Great Britain is due to Mr. W. Lobb, the indefatigable collector of Messrs. Veitch, who sent home fine living plants.

This fir is one of so much interest to our cultivators, as it will undoubtedly prove perfectly hardy, that we copy Mr. Lobb's own words, in relation to this species, which Dr. Hooker calls a most "noble tree":—

"This beautiful and singular tree forms here (in the California forests) the most conspicuous ornament of the arborescent vegetation. On the western slopes towards the sea, it occupies the deep ravines, and attains the height of 120 to 150 feet, and from one to two feet in diameter; the trunk is as straight as an arrow; the lower branches decumbent; the branches above are numerous, short, and thickly set, forming a long, tapering pyramid or spire, which gives to the tree the peculiar appearance which is not seen in any other kinds of the *Pinus* tribe. When standing apart, and clear from the surrounding trees, the lower branches frequently reach the ground, and not a portion of the trunk is seen from the base to the top.

"Along the summit of the central ridges, and about the highest peaks, in the most exposed and coldest places imaginable, where no other pine makes its appearance, it stands the severity of the climate without the slightest perceptible injury, growing in slaty rubbish, which, to all appearance, is incapable of supporting vegetation. In such situations it becomes stunted and bushy, but even then the foliage maintains the same beautiful dark green color, and when seen at a distance it appears more like a handsomely-grown cedar than a pine. No doubt it is one of the hardiest trees of the California vegetation, and is equally well adapted for clothing the mountain-tops as the sheltered valley.

"The cones, too, are quite as singular as the growth of the tree is beautiful; when fully developed, the scales, as well as the large leaf-like bracts, are covered with globules of thin, transparent resin, presenting to the eye a curious and striking object. Douglas was mistaken in saying this fir does not occur below 6000 feet of elevation; on the contrary, it is found as low as 3000 feet, where it meets Taxòdium sempervìrens."

The auriferous sands are not all the treasures of California. Her mountain vegetation is yet to open to us new and magnificent specimens of forest growth. How grand must be this tree, towering to the height of 120 feet, and so densely clothed with its branches of the darkest green that not an atom of its spiry trunk can be seen! creating a livelier interest in its introduction, says Dr. Hooker, than any of the Coniferæ, "not excepting even the Deodar," the sacred tree of the Himalayas. Lamentable is it that, with the speedy means of communication between the Atlantic and Pacific coasts which we now possess, seven years should have elapsed since the acquisition of California, and yet our transatlantic friends should be the first to find out the value of our own trees. The *A*'bies bracteàta is just what we want. Growing "in the most exposed and coldest places imaginable," says Mr. Lobb,—and every one who has read Fremont's tour knows what that cold is,—it would thrive throughout New England. Thus, while we are spending years of valuable time and lavishing expense upon the introduction of doubtful hardy pines, we have a native which eclipses all. It should be speedily introduced. (*Bot. Mag.*, July.)

234. SCHEE'RIA MEXICA'NA *Seem.* MEXICAN SCHEERIA. (*Gesner*aceæ.) Mexico.

A greenhouse or stove plant; growing one foot high; with purplish flowers; appearing in summer; increased by offsets; grown in light peaty soil. Bot. Mag. 1853, pl. 4743.

A nearly-allied plant to Achimenes, of the same habit, and with blossoms apparently between an achimenes and a gloxinia. It was introduced in 1850, from Chihuahua, in Mexico, and flowered abundantly at Kew, in the autumn of 1852. Dr. Hooker says he has "no hesitation in predicting that Schèer*ia* mexicàna will become a universal favorite, and that in a few years it will be found in every garden." In our climate it will succeed admirably as a summer greenhouse plant, treated like the Achimenes. (*Bot. Mag.*, Oct.)

235. Erythrochi'ton brasilie'nse *Nees and Mart.* Brazilian Erythrochiton. (Rutàceæ.) Brazil.

A stove plant; growing three feet high; with white flowers; appearing all summer; increased by cuttings; grown in light rich soil. Bot. Mag., 1853, pl. 4742.

A Brazilian plant, with a palm-like habit, growing erect, imbricated, and "bearing a tuft of very long leathery leaves at the extremity, and terminated with a cluster of flowers which "are large and particularly handsome, the calyx being red, the corolla white." It is a good ornament to the stove, and blossoms frequently and almost throughout the year. (*Bot. Mag.*, Oct.)

236. Be'rberis conci'nna *J. D. Hooker.* Neat Berberry. (Berberidaceæ.) Sikkim Himalaya.

A hardy or half-hardy shrub; growing three feet high; with yellow flowers; appearing in spring; increased by layers; grown in light rich soil. Bot. Mag. 1853, pl. 4744.

"A very beautiful and distinct little species." It was found in the Sikkim Himalaya, at an elevation of 12,000 to 13,000 feet, where it forms a low bush, three feet high, "with spreading branches thickly covered with small leaves of a deep green hue, and polished above, snowy white and glaucous below; these colors, the large oblong scarlet berries, and red branchlets giving the shrub a singularly neat and pretty appearance when in fruit. The plants flourish luxuriantly in the open border at Kew. Probably hardy with us. (*Bot. Mag.*, Oct.)

MISCELLANEOUS INTELLIGENCE.

Art. I. *Societies.*

WORCESTER COUNTY HORTICULTURAL.

The annual meeting of this society was held at their Hall in this city, on Wednesday, Dec. 4, when a reorganization for the current year took place by the election of the following officers, viz.:—

President—Hon. Stephen Salisbury.

Vice Presidents—William T. Merrifield, of Worcester; John C. Whiting, of Northbridge; George T. Rice, of Worcester.

Trustees—John Milton Earle, Worcester; C. W. Forbush, Grafton; I. Davis, Worcester; W. M. Bickford, Worcester; Wm. C. Capron, Uxbridge; Wm. Workman, Worcester; Ansel Lakin, Worcester; Joseph A. Denny, Leicester; Leonard Burrage, Leominster; Geo. Jaques, Worcester; Geo. A. Dresser, Worcester; D. Waldo Lincoln, Worcester; S. P. Champney, Worcester; Harvey Dodge, Sutton; Job C. Stone, Shrewsbury; Samuel H. Colton, Worcester; Thos. Bond, North Brookfield; John Brooks, Princeton; Emory Bannister, Worcester; Jonathan Forbush, Bolton.

Secretary—J. Henry Hill.

Treasurer—Fred. Wm. Paine.

Librarian—Clarendon Harris.

Auditors—George T. Rice, Wm. M. Bickford.

From the Treasurer's report it appears that the receipts during the year, for rent, members' admission fees, and the proceeds of the annual exhibition, were,	$2,164 33
Amount expended for expenses of exhibitions, &c., &c.,	394 59
Which makes the net income from the Society's property and the year's operations,	$1766 74

A letter was received from the President, the Hon. Stephen Salisbury, tendering the Society the munificent donation of $3000, to be appropriated towards the Society's indebtedness for the Hall. (*Worcester Spy.*)

[This additional fund will place the Society in a most flourishing condition, and enable it to do a vast deal of good in promoting the cause of horticultural progress in the interior of our State.—Ed.]

NEW HAVEN COUNTY HORTICULTURAL.

The following gentlemen were elected officers of the society for the current year, at the annual meeting:—

President—E. A. Bishop, M. D.

Vice Presidents—Stephen D. Pardee, Esq., and C. B. Lines, Esq.

Directors—James Harrison, S. I. Baldwin, E. E. Clarke, Nathaniel A. Bacon, C. White, C. Beers, J. H. Totten, Jona. Stoddard, O. F. Winchester.

Recording Secretary—George Gabriel.

Corresponding Secretary—N. B. Ives, M. D.

Treasurer—C. B. Whittlesey.

At the close of the annual Fair, in September, a Pomological Festival was held in the State House, New Haven. "The halls were neatly carpeted, festoons of evergreen hung tastefully from the walls, and the richest perfumes of the sweetest flowers and most delicious fruits, mingled with some of the finest instrumental and vocal music, filled the building." A large number of ladies and gentlemen sat down to the entertainment which was provided. The Hon. A. N. Skinner presided, and made a neat address upon taking the chair. He was followed by C. B. Lines, Esq., Dr. Ives, Prof. Silliman, and Dr. Hooker. An original ode was sung, after which the fruits which graced the tables "were besieged by three or four hundred hungry and long-expectant members, and invited guests."

NEW YORK HORTICULTURAL.

The annual meeting of the society was held at Metropolitan Hall, on the 1st of December, and the following officers elected:—

President—Shepherd Knapp.

Vice Presidents—Wilson G. Hunt, Wm. W. Livermore, John Groshon, R. L. Pell, Abm. A. Leggett.

Treasurer—Jacob C. Parsons.

Recording Secretary—Peter B. Mead.

Corresponding Secretary—Geo. Wm. Curtis.

Librarian—James Cheetham.

Finance Committee—John Groshon, W. W. Livermore, H. M. Schieffelin.

Library Committee—Andrew Reid, Peter B. Mead.

Premium Committee—Peter B. Mead, Alexander Gordon.

Committee on Fruits—Charles More, Thomas Hogg, Jr., Wm. S. Carpenter.

Committee on Plants and Flowers—J. E. Rauch, J. B. Lenoir, Robert Reid.

Committee on Vegetables—A. Bridgeman, John Suttle, Charles Knight.

Committee on Distribution of Seeds, &c.—Isaac Buchanan, Charles Place, Jacob C. Parsons.

On motion of P. B. Mead, the society voted to hold conversational meetings during the winter, for the discussion of various subjects of interest to the members. The first was to be held on Monday, Dec. 5th.

PENNSYLVANIA HORTICULTURAL.

Ad Interim Fruit Report.—The Fruit Committee respectfully report that since the November meeting of the Society, the following fruits have been received by them:—

From Mrs. J. R. Latimer, pears for their name, grown by Dr. Charles Kuhn, of this city. These were unusually fine specimens of the Echasserie.

From Lloyd N. Rogers, Esq., Baltimore, fifteen varieties of pears.

3. *Urbaniste.*—Specimens very fine. This Flemish variety is one of the best of the foreign pears. In the November number of Hovey's *Magazine*, we are told that "the Beurre Soulé has long been familar to Boston pomologists as the Urbaniste." In regarding the Buerre Soulé and the Urbaniste identical, the Boston pomologists are, we think, in error. The specimens of the former exhibited in 1848, as was remarked at the time by one of their ablest pomologists, bore some resemblance to the Hanners, (Cushing,) much more so indeed than to the Urbaniste, though we do not consider it synonymous with either of them.

[The Urbaniste often so nearly resembles the Cushing, in color, shape, and size, that it could scarcely be distinguished from it were it not that it ripens at a different season. The Beurre Soulé was exhibited two or three years before its identity was detected.—Ed.]

4. *General Taylor.*—Size, under medium, two and a half inches long by two and a half wide; form, turbinate, obscurely pyriform, broad at the crown; color, cinnamon russet, becoming fawn on the exposed side; stem, three-fourths of an inch long and one-eighth thick, inserted into a very small cavity; calyx, partially closed, set in a broad, not very deep, furrowed basin; core, medium; seed, dark brown, ovate, no angle at the obtuse end; flesh, yellowish white, granular, becoming buttery and melting, but somewhat gritty at the core; flavor, as high as the Seckel, aroma delicious; quality, "best;" maturity, November. The General Taylor is believed to be a native of Maryland. The tree supposed to be the original one, grows near Baltimore, and is about 25 or 30 years old. It presents no evidence of having been worked; and Mr. Rogers assures us that scions, taken from suckers which sprung up from its root, have borne fruit similar in all respects to that of the parent tree. We commend the variety to the attention of pomologists.

From Charles Kessler, Esq., Reading, two varieties of pears, and five varieties of apples, without name.

1. *The Reading Pear.*—A desirable winter variety, which has more than once been favorably noticed by us. Not yet mature.

2. *Winter Pear.*—Medium size, roundish, fair yellow; for the table, scarcely "good" in quality.

3. Apple, grown by Mr. William Young, of Reading. Size, large, three and five-eighths inches long by three and three-eighths broad; form, conical; color, beautifully striped and mottled with red on a yellow ground; stem, three-fourths of an inch long and one-twelfth thick, inserted in a moderately-wide, deep, acuminate cavity; calyx, small, closed, set in a narrow, very superficial, wrinkled basin; seed, medium, plump, oval; core, large; flesh, not very juicy; flavor, pleasant; quality, "good."

4. Apple, grown by Mr. Jacob Kurr, Middleburg, Bethel Township, Berks County. Size, above medium, two and seven-eighths inches long, by three and five-sixteenths broad; form, round-oblate, obscurely conical; color, fair yellow-white, with crimson blush, containing one or more distinct white spaces or streaks on the blush; stem, five-eighths of an inch long, and one-twelfth thick, inserted in a wide, deep cavity; calyx, small, closed, set in a small, shallow, slightly-furrowed basin; seed, dark brown, plump, ovate; flesh, tender, rather dry; flavor, pleasant; quality, "good."

5. Apple, grown near Reading. Size, below medium, two and a half inches long, by two and three-fourths broad; form, roundish; color, greenish yellow, with a brown blush; stem, variable, from five-sixteenths to five-eighths of an inch long, and one-twelfth thick, inserted in a deep, narrow, acuminate cavity; calyx, large, closed, set in a deep, rather wide, obscurely-plaited basin; seed, light brown, broad, flat; flesh, fine texture; flavor, delicately aromatic; quality, "very good."

9. Apple, grown by Samuel Zeiber, Esq., of Reading. Size, below

medium, two and a quarter inches long, by two and seven-eighths broad; form, round oblate; color, red in stripes of different hues, russeted about the base; stem, three-fourths to one inch long, and one-twelfth thick, inserted in a moderately-wide, not very deep, russeted cavity; calyx, small, closed, set in a very small, plaited basin, sometimes almost obsolete; flesh, crisp, subacid; quality, "good."

7. *The Yost.*—A fine apple which has been noticed in several of our reports.

From Wm. V. Pettit, Esq., of Colonnade Row, a very large specimen of the Niles Pear. Size, four inches long, by three and three-fourths broad, and weighing one and one-fourth pounds; form, roundish-oblong; color, yellow at maturity, with many russet dots; stem, one and one-fourth inches long, and one-fifth thick, inserted in a narrow, rather deep, furrowed cavity; calyx, small, closed, set in a deep, narrow, regular basin; seed, light brown, large, plump, long, acuminate; flesh, somewhat granular, becoming buttery; flavor, not high, but saccharine and pleasant; quality, "very good;" maturity, December; an abundant bearer of fair and large fruit. This is a foreign variety, imported from France, by the Hon. Jno. M. Niles, of Hartford, Conn. The imported tree was sent by him, some years ago, to his friend Wm. V. Pettit, Esq., of this city. Our attention was first directed to it by Mrs. Catherine Stanley, of East Hartford, an honorary and corresponding member of our society, and distinguished as well for her moral, social, and intellectual accomplishments, as for her zealous and untiring devotion to horticulture. Being uable to recognize the variety, and its true name having been lost, we designated it the Niles. Some of the Boston Pomologists, who are more familiar with the Easter Beurré than we are, consider it that variety; while others unhesitatingly say it is not the Easter Beurré. Without giving a decided opinion on this point we will merely remark that it differs from the specimens we have been in the habit of seeing of the latter, in being more oblong in form, of a more yellow color, having a longer stem, a deeper and more regular basin, and in its earlier period of maturity.

From Mr. A. Parker, two varieties of pears. One is called a Native Butter Pear, and resembles the Petre; the specimen is too much decayed for us to form any opinion of its quality. The others, sent for their name, are the Echasserie.

From Mrs. John R. Latimer, the Cushing Raspberry, grown by Hartman Kuhn, Jr., Esq., of this city. Specimens are remarkably fine. The autumnal fruit of this twice-bearing variety is even larger than that which ripens in summer, at the usual raspberry season.

From Mr. H. B. Lindley, Athens, O., through C. Cope, Esq., fine specimens of an apple, for its name.

From Dr. James S. Rumsey, Fishkill Landing, Dutchess Co., N. Y., a pear and two varieties of apples.

Buel's Favorite, sometimes called Spotted or Grey Pippin, grown by Dr. Rumsey, from a scion obtained at Albany. Size, full medium, two and a half inches long, by three and one-eighth broad; form, roundish; color, greenish yellow, with a faint fawn cheek; stem, three-fourths of an inch long, and slender, inserted in a deep, acuminate, russeted cavity; calyx, medium, set in a deep, moderately-wide, furrowed basin; flesh, a little tough, owing probably to the specimen being a little shriveled; flavor, partakes somewhat of that of the Newtown Pippin, though in an inferior degree; quality, "good." The shriveled condition of the fruit may have caused us to give to this variety less merit than it deserves.

An exceedingly beautiful apple, grown by H. W. Sargent, Esq., Wodenethe, Fishkill Landing. Size, large, three inches long, by three and a half in width; form, broadly conical, obscurely ribbed; color, waxen yellow, with a brilliant vermillion cheek; stem, three-fourths of an inch long, and slender, inserted in a wide, deep cavity; calyx, small, closed, set in a narrow, rather deep, furrowed basin; core, large; seed, light brown, very small, roundish, terminating abruptly in an acute point; flesh, pale yellow, fine texture, tender, moderately juicy; flavor, mild and pleasant; quality, "very good." The tree which bore this fruit is small, has just come into bearing, and is supposed to be some known kind. It is not the White Calville. The fruit bears a considerable resemblance to the Belmont, which, however, is rarely so conical. If some friend would have the kindness to send us specimens of the Belmont, we might, possibly, be able to decide whether it is identical with the kind just described. The seed of the latter are peculiar; few apples of its size have so small a seed, and still fewer of its form possess seed so short and roundish. Be it what variety it may, its "very good" quality, fine size, handsome form, and brilliant coloring, appropriately adapt it to the table, and render it eminently worthy of extensive cultivation, if it should succeed as well in other localities as at Wodenethe. Scions, we trust, will be freely disseminated by Mr. Sargent and Dr. Rumsey.

Belt's Hybrid Walnut.—In noticing this interesting nut in our last report, we stated, from information we had received, that Mr. Joshua Pierce, a skilful nurseryman of Washington, had "succeeded, in two instances, in grafting this variety on the English Walnut." Mr. Pierce has since informed us that this statement is partially incorrect. It is true, he succeeded in two instances in grafting the Hybrid, not, however, on the English Walnut, but on the Butternut. Scions were inserted, in various ways, by him, on about a dozen of stocks of the English Walnut, without union taking place in a single instance. These stocks having been transplanted only a month previously, may, as he intimates, in some measure account for the failure of the operation. In the two cases in which he was successful in working the Hybrid on the Butternut, his mode of grafting differed from any of those in ordinary use, and requires special notice. In our preceding report we alluded to the great want of success experienced by horticulturists in grafting the walnut, and recommended two ways of obviating the difficulty. Mr. Pierce deserves our cordial thanks for communicating to us a third one, which, in his hands, has been attended by promising results. And that we might clearly comprehend it, he very kindly sent to a member of the committee one of the two trees he had successfully worked. His mode, which is a species of inarching, or grafting by approach, is performed in the fol lowing manner:—A portion of the scion, at a point about two-thirds of the distance from its lower end, is pared away, well down into the alburnum, two inches in length; a corresponding portion of the stock, near its crown, is also removed. The scion and the stock, after being both tongued, are to be accurately adjusted, so that the inner bark of the two shall be in exact apposition. He then binds them firmly together with a strip of bass matting, and applies a covering of grafting clay; after which the earth is heaped up around it. Before proceeding to the operation, it is of course necessary to remove the earth from about the root of the stock sufficiently far to enable the heel of the scion to penetrate some distance below the surface. Mr. Pierce thinks he removed the top of the stock at the time the graft was inserted, but suggests the propriety of allowing it to remain until complete union between the scion and stock is fully established, and then cutting it off close down to the point of connection. The theoretical advantages of the mode of grafting now described, in cases of unusual difficulty, are obvious; and its practical utility is strikingly exemplified in the worked specimen very kindly forwarded to us by Mr. Pierce. Although not entirely novel, the plan had probably never before been resorted to in the case of the walnut. A proceeding somewhat analogous has been employed in propagating the Camellia, in which case, however, the heel of the scion is immersed in a vessel of water, instead of being inserted in the earth.

Beurre Clairgeau Pear.—This large and valuable new foreign pear, received from Hon. B. V. French, was noticed, and an exterior description of it given, in our October ad interim report. The specimen not being sufficiently mature at that time for testing, was laid aside, and was not cut till the 9th of December, when it was somewhat shriveled. We now complete the description commenced in October. Core, under medium; seed, dark brown, small for the size of the fruit, elongated, narrow, plump, with a prominent angle at the obtuse end; flesh, yellowish-white, buttery, melting; flavor, perfumed and delicious; quality, "best." The Beurré Clairgeau has been described and figured both in the *Horticulturist* and in Hovey's *Magazine;* and its period of maturity is represented to be October and November. The advanced season of the year, December 9, when our specimen was eaten, may have enabled it to develop more completely its fine qualities. To this or to some other auspicious circumstance, may, perhaps, be attributed the somewhat higher estimate expressed by us of its quality, than that entertained by some other pomologists quite as competent as ourselves to judge of its merits. At any rate, we are fully persuaded that the specimen examined by us was, in all respects, justly entitled to the highest grade of excellence.

From the Hon. Geo. W. Woodward, Wilkesbarre, Pa., blackberries. Having learned from various sources that the blackberry grown in the valley of the Wyoming was of unusual size, we were anxious to see specimens of the fruit. This, the kind attention of Judge Woodward enabled us to do, about sixteen months ago. The specimens then forwarded to us, though in a dried state, were remarkably large; and we hoped, by planting the seed, to obtain varieties still finer; but, unfortunately, none of the seed vegetated.

The specimens now received were gathered during the summer of the present year, at their usual time of ripening, and put into a bottle of alcohol. The bottle having been placed on its side, the cork came out and the alcohol escaped. The berries, therefore, did not retain their full size, and yet some of them measured one and one-eighth inches in length. The number of pips contained in each is unusually great; in one berry we counted 113, in another 146. In form the fruit resembles that of the cultivated high bush variety of Boston. The blackberry is, no doubt, capable of considerable improvement in size and quality. With a view of ascertaining to what extent this can be accomplished by cultivation, by crossing, and by raising seedlings, we are desirous of obtaining some of the most remarkable kinds from different sections of our country. Judge Woodward has very kindly promised us plants of the one grown in the vicinity of Wilkesbarre. To Mr. C. M. Hovey we are already indebted for the Boston Improved High Bush variety; and to Mr. Wm. R. Prince for the White, and the Parsley-leaved. The New Rochelle, from Westchester Co., N. Y., we have not yet received; will Mr. Lawton send us by express a good-sized plant of this variety? The blackberry, like the raspberry, may be propagated with ease, and with almost magic rapidity, by division of the root into small sections.

CALIFORNIA AGRICULTURAL.

A meeting of those interested in agriculture, agreeably to a published call signed by several gentlemen, convened in San Francisco on Monday, Dec. 5, 1853, J. K. Rose in the chair, and W. N. Thompson, Secretary. A committee of four was appointed to draft a constitution, which was presented by Mr. Thompson on the folowing day and unanimously adopted. The following officers were then elected for the ensuing year:—

President—F. W. Macondray.

Vice Presidents—One from each county. J. M. Horney, Alameda; Maj. J. Bidwell, Butte; Mr. Chipman, Contra Costa; Abel Stearns, Los Angeles; Jerome D. Ford, Mendocino; Gen. C. J. Hutchinson, Sacramento; C. M. Weber, San Joaquim; Dr. J. B. Clemens, San Luis Obispo; Wm. F. White, Santa Cruz; Major P. B. Reading, Shasta; Gen. G. M. Vallejo, Sonoma; Mr. Ryan, Trinity; Gen. John A. Sutter, Yuba; James K. De Long, El Dorado; Capt. J. A. Morgan, Marin; J. Bryant Hill, Monterey; J. W. Osborne, Napa; Judge J. Judson Ames, San Diego; S. R. Throckmorton, San Francisco; J. F. Kennedy, Santa Clara; Pablo de la Guerra, Santa Barbara; Jefferson Hunt, San Bernardino; Simpson Thompson, Solano; E. Linoberg, Tuolumne.

Vacancies in other counties will be filled by the Executive Committee, as provided by the constitution.

Recording Secretary—C. V. Gillespie, Esq.

Treasurer—Judge David Chambers.

Corresponding Secretary—J. L. L. F. Warren.

Executive Committee—E. L. Beard, Alameda Co.; J. K. Rose, San Francisco Co.; D. W. C. Thompson, Sonoma Co.; H. C. Malone, Santa Clara Co.; Wm. N. Thomson, San Francisco Co.

ART. II. *Massachusetts Horticultural Society.*

REPORT OF THE COMMITTEE ON FRUITS.

[Omitted in our last No.]

The Committee take pleasure in congratulating the Society on the eminent success appertaining to this branch of its fostering care. Results have been attained the past season, developing the capabilities of soil and climate in perfecting the choicest varieties of fruits—more particularly the pear—that would compensate for years of toil.

It may well be questioned whether like results could be shown, in regard to the last named variety, in any exhibition in any country,—we are aware of the purport of language; and still do not hesitate to consider the remark as stable.

During the same time our amateurs have not been backward in producing seedlings of every variety of fruit, while in pears a diligence has been shown deserving the warmest praise of those who have ever felt that the parent society should be enabled to go on with an increasing and disseminating influence.

With limited means, the Society has been enabled, through its rich display from week to week, to afford the public an opportunity to compare and compete to an extent almost literally to the loading down of the tables allotted to this department. And the Committee would here bespeak the thanks of the Society, for a few who have come forward week after week during the whole season, affording from their own grounds a display which in many localities would alone form exhibitions of merit, viz.: The President, Messrs. Hovey & Co., M. & F. Burr, M. P. Wilder, Samuel Walker, J. Fisk Allen, W. C. Strong, M. H. Simpson, Henry Vandine, Josiah Lovett, Winship & Co., Breck & Son, A. W. Stetson, J. P. Cushing, Azell Bowditch, E. M. Richards, Samuel Downer, Jr., W. R. Austin, Mrs. F. B. Durfee, Josiah Stickney, C. E. Grant, Messrs. Stetsons, Francis Dana, Hyde & Co., B. Harrington, J. B. Moore, Frederick Tudor, and many others, of whom honorable mention might be made.

It may well be deemed a task when the Committee are called upon to decide the premiums where all are excellent, and so much superior to the contributions of former years; and, though they have been obliged to declare in favor of one or another who happened to compose the Committee, it must be remembered that your Committee is obliged to be made up of such members as have made this a zealous choice, and for years have been striving to attain to a superiority of culture, and of necessity the Society must bear in mind that to them is due some share in the getting up from their own grounds these liberal contributions.

To shut them out as competitors, a result would entail on the Society, depriving it of some of the largest experience, for the very information required could not be obtained to do duty in this department. And to the better understanding in the premises, we would say, *that it is distinctly understood in Committee*, that unless such fruits or specimens are of a decidedly marked superiority, the preference *shall be given to the contributor outside of the Committee.* Your Committee are impelled to this statement, with the view that all competitors may feel that exact justice will be awarded to each and every contributor, and, certainly, if there is vantage-ground anywhere, it is with him who does not go through the cheerful, though unpaid and uncoveted duties from week to week during the whole year.

To the better understanding of the responsibilities resting on them, each member is provided with a book "in which shall be kept a true record of all contributions from week to week," and in which weights, measures, &c., &c., are carefully noted; and though a casual observer, carrying in mind from one exhibition to another, might not deem the award in all cases agreeable with his judgment, it must be borne in mind that when the awards receive final action it is in full council, bringing to their aid the contents of each and every record made—and we take satisfaction in stating, that such awards have been made in perfect unanimity.

Much attention has been given to the introduction of desirable varieties of pears by importation, and we would instance the names of a few who have carried out such arrangements on the most liberal scale, viz.: Hon. J. S. Cabot, Hon. M. P. Wilder, Hon. Samuel Walker, Messrs. Hovey & Co., and Robert Manning, each of whom have liberally furnished specimens at fruition, though they might chance to perfect but a single specimen.

Among the modern pears which have fully sustained their former reputation, and may be considered as valuable for general cultivation, are the following sorts, viz.: Poire d'Albret, Beurré Clairgeau, Grand Soliel, Beurré Sterkman, Nouveau Poiteau, Fondante de Malines, Beurré Langelier. To which may be added the following, of native origin, viz.: Howell, Sheldon, Dallas, Boston, Collins, Meriam, Wadleigh, and Kingsessing.

Of the seedling pears heretofore spoken of as raised by Mr. Francis Dana, the Committee have tested as ripening in course, and see now no reason to change an opinion already expressed. The same can be said of an excellent seedling called the Boston, offered by Messrs. Hovey, several years in succession.

In a former part of this report it will be noticed that we spoke of several members who had been foremost in availing themselves of all that could be brought to our aid by the introduction from abroad of such pears as had received favorable notice, and we will herewith append the lists and remarks, as furnished by the several gentlemen.

From the Hon. J. S. Cabot, Salem. Alexandre Lambre, Beurré Gens, Choix d'un Amateur, Poire Rigoleau, Millot de Nancy, Eastnor Castle, Blanc Per Ne, Prevost, Belle Julie, Calebasse Delvigne.

Dorchester, December 18, 1853.

To Eben Wight, Esq., Chairman of the Fruit Committee of the Massachusetts Horticultural Society.

Sir,—In response to your note of yesterday, I herewith transmit descriptions of new pears which I have exhibited the past season. The quality of many of these has been pretty fully ascertained, but another favorable season will test them more thoroughly.—*Respectfully yours, &c.,* Marshall P. Wilder.

New Pears, exhibited in the year 1853.

1. *Alexandre Lambré.*—Size, medium; form, roundish, bergamot shape; calyx, moderately sunk in flat basin; stem, rather stout, less than one inch in length, generally set without depression; color, yellowish green, occasionally mottled with red on the sunny side, russeted at the stem and calyx, and stippled with coarse dots; flesh, greenish white, melting and juicy; flavor, sweet, rich, with the Passe Colmar aroma. Season, November to December. Quality "very good," perhaps "best." Core, small; seeds, numerous, plump, and acutely pointed.

2. *Poire d'Avril.*—Size, medium; form, acute pyriform, inclining to turbinate; calyx, closed, sunk in rather broad, moderately deep basin; stem, one inch or more in length, fleshy at the junction, rather stout; color, yellowish green, skin rough, somewhat russeted and reddened on the sunny side; flesh, greenish white, crispy and juicy; flavor, resembles Easter Beurré, but is much inferior. Season, February to May. Keeps well, and ripens without difficulty. Quality, good, with the promise of being valuable as a very late fruit. Core, small; seeds, long, sharply pointed. Mr. Rivers ranks this variety as a stewing pear.

3. *Beurré Soulange.*—Size, medium to large; form, acute pyriform; stem, one inch or more in length, curved, fleshy at the junction; color, pale clear yellow at maturity, with occasional traces of russet; flesh, melting, and very juicy; flavor, rich, sugary, with peculiarly pleasant aroma. Season, October to November. Quality, "very good," will probably prove "best;" a desirable acquisition. Received some years since from Brussels, and of doubtful nomenclature.

4. *Beurré Bachelier.*—Size, very large; form, obovate obtuse pyriform; stem, short and stout, seldom more than three-fourths of an inch in length, planted in a narrow folded cavity; color, clear green until mature, when it has a handsome yellow skin; flesh, tolerably melting and juicy; flavor, pleasant, inclining to sweet, not high, but agreeable. Season, November to December. Quality, good; may prove, on further trial, very good.

The Beurré Bachelier is described as a pear of the largest size in the European Catalogues. The tree is tardy of growth on the quince root, but succeeds and bears abundantly when worked on a standard, a graft of one foot in length having produced the last season nine perfect pears.

5. *Theodore Van Mons.*—Size, large; form, obtuse obovate pyriform; stem, about one inch in length, planted without depression; calyx, large, open, moderately sunk; color, green at first, but becoming, when ripe, clear yellow; skin, smooth and handsome; flesh, tender, juicy and melting; flavor, pleasant, sweetish, with some aroma. Season, October to November. Quality, good, probably, very good. Tree, vigorous, growth upright, forming a fine pyramid, and bears well, either on the pear or quince. A hardy, valuable fruit.

6. *Doyenné Robin.*—Size, medium; form, roundish, bergamot shape; stem, rather long, planted without much depression, on a flattened surface; calyx, small, moderately sunk; color, pale lemon yellow, russeted at the stem and calyx, and profusely stippled with coarse dots; flesh, white, melting and juicy; flavor, sprightly, vinous, with pleasant astringency, like Doyenné d'Eté, rich and good; quality, very good; core, medium; seeds, plump and fair. Season, October 1st.

7. *Malconaitre d'Haspin.*—Size, large; form, roundish obovate; stem, about one inch in length, inserted in slight depression; calyx, closed, in rather deep, irregular basin; skin, dull yellow, with brownish red cheek, stippled with coarse dots, and russeted at the calyx; flesh, juicy, tender and melting; flavor, rich subacid, perfumed. Season, October to November. Quality, very good; core, medium; seeds, small. Tree, vigorous, hardy and productive; a valuable market fruit.

8. *Beurré Nantais.*—Size, large; form, pyriform, slightly contracted in the neck, somewhat obtuse; stem, about one inch in length, rather stout; color, clear green, until maturity, when the skin assumes a pale yellow, generally without any blush, and with but few traces of russet; flesh, melting, tender, and juicy; flavor, sacharine, tolerably rich. Season, September 15 to October 15. Quality, very good; tree, grows well on the pear or quince, comes early into bearing, and makes a fine pyramidal tree. Mr. Leroy advertises this as a new fruit, but it has long been known in other collections.

9. *Fondante Agreeable.*—Size, medium; form, roundish obovate; stem, one inch or more long, fleshy at the base, set on one side; calyx, open in broad shallow basin; color, dull yellowish green, slightly russeted; flesh, tender, melting and juicy; flavor, very pleasant and refreshing, with delicate aroma; quality, very good, excellent. Season, last of August. Core, large; seeds, large, plump.

10. *Beurré Navez.*—Size, full medium, or large; form, turbinate; stem, one inch or more in length, moderately strong, inserted on the apex of the fruit; calyx, closed, not much sunk; flesh, melting and juicy; flavor, rich, vinous, with pleasant aroma; quality, very good. Season, October.

11. *De Bavay.*—Size, medium; form, turbinate; stem, one and a quarter to one and a half inches in length, planted without depression; calyx, large, open; color, dull yellow, coarsely stippled, and considerably covered with traces of russet; flesh, juicy, tolerably melting; flavor, agreeable subacid, moderately rich; quality, very good. Season, October to November. A good bearer, either on the pear or quince root.

12. *Doyen Dillen.*—Size, medium to large; form, obtuse pyriform, inclining to oval; stem, short and stout, fleshy at the junction; skin, dull green, becoming yellow at maturity; flesh, melting, with sufficient juice; flavor, agreeable subacid, sweetish, with pleasant perfume. Season, October to November. Quality, good; may prove very good.

13. *Van Mons*, 1825.—Size, full medium; form, obovate obtuse pyriform; stem, rather stout, one inch or more in length, planted in a slight depression; calyx, closed, rather deeply sunk; skin, at maturity pale yellow, with a few russet traces, and occasionally a brownish red cheek;

flesh, melting, juicy and tender; flavor, pleasant subacid, rich. Season, October to November. Quality, very good, if not best. Tree, vigorous, much of the habit of the Urbaniste, both in foliage and fruit, but is a very distinct variety.

14. *Laure de Glymes.*—Size, medium; form, oval, turbinate; calyx, open, moderately sunk; stem, short, less than an inch in length, and inserted without depression; color, dull yellow, ground almost completely covered with orange russet, skin handsome; flesh, white, melting, not very juicy; flavor, sweetish, with pleasant aroma. Season, October to November. Quality, good. Valuable as an orchard pear, bearing profusely, in clusters. M. Bivort describes this fruit in his Album de Pomologie, as of exquisite quality. Perhaps another year's trial may raise its character in our classification.

15. *De Sorlus.*—Size, large; form, obtuse pyriform, inclining to ovate, narrowing abruptly near the crown; stem, about one inch in length, rather stout, planted in a slight depression; color, light dull green, becoming yellow at maturity, with some russet, particularly at the stem and calyx; flesh, white, half melting, middling juicy; flavor, pleasant, but lacks richness and character. Season, November to December. Quality, not fully ascertained, needs further trial. The tree is of fine pyramidal habit, and grows well as a dwarf or standard.

16. *Millot de Nancy.*—Size, rather below medium, never large; form, acute pyriform; stem, one inch in length, set without depression, in folds, like the Passe Colmar; color, dull yellow, ground overspread with russet, sometimes reddened on the sunny side; flesh, buttery and melting, not very juicy; flavor, tolerably rich, sweetish, with peculiar and pleasant aroma. Season, October to November. Quality, good, promises to be classed as very good. This is No. 2670 of Van Mons's Seedlings.

17. *Fondante des Pres.*—Size, medium; form, turbinate, inclining to pyriform, broad across the middle; stem, of middling strength, one inch long, slightly sunk in folded cavity at the junction; color, yellowish green, becoming clear lemon yellow at maturity, coarsely stippled, a few traces of russet, and occasionally a little red next the sun; flesh, white, melting, juicy; flavor, sweet, agreeable, with considerable aroma. Season, October. Quality, very good. This is another of the seedlings of Dr. Van Mons. It does not appear to set its fruit so readily on the pear as on the quince stock.

18. *Comte de Flandre.*—Size, large; form, pyramidal pyriform, narrowed in the neck, and broad at the middle, resembling the Marie Louise; stem, stout, fleshy at the base, one to one and a quarter inches long, set without depression; calyx, moderately sunk; color, yellowish green, becoming quite yellow when ripe, considerably traced with russet, and marbled occasionally with dull red next the sun; flesh, melting and juicy; flavor, rich subacid, inclining to sweet, with a pleasant aroma; quality, very good. Season, November to December. Tree, vigorous and prolific. A seedling of Dr. Van Mons's Collection, which fruited in 1843 for the first time, under No. 2672.

19. *Louise de Prusse.*—Size, medium; form, roundish obovate, resem-

bling, in appearance, the Belle Lucrative; calyx, small, sunk in rather deep irregular cavity; stem, stout, generally less than one inch in length, and set without depression; color, dull green, becoming of a golden hue at maturity, a little obscured with russet spots, and frequently touched with red on the sunny side; flesh, white, melting, buttery and juicy; flavor, pleasant subacid, inclining to sweet, with an agreeable aroma. Season, October to November. Quality, very good. The tree is upright in growth, and forms a fine bushy pyramid. Succeeds well, either on the pear or quince root.

20. *Bouvier Bourgermestre.*—Size, medium to large; form, obtuse pyriform, long, narrowed in the neck; stem, one to one and a quarter inches long, set with but little depression; calyx, small, in narrow, deep, irregular cavity; color, clear green, becoming yellow at maturity, and with an occasional red cheek; flesh, white, melting and juicy; flavor, pleasant, tolerably rich, sweet. Season, October to November. Quality, good, promises well.

The tree is of rather feeble growth on the pear root. It is quite a distinct and handsome fruit, having no resemblance to the varieties heretofore received, under the name of Bourgermestre.

21. *Grosse Calebasse of Langelier.*—Size, extra large; form, pyriform, nearly acute, but occasionally obtuse; stem, large, stout, fleshy where it is joined to the fruit, about one inch in length; calyx, moderately sunk, segments frequently not persistent; flesh, coarse, tender; flavor, rather astringent, inferior; color, dull yellowish green, mostly covered with a thick coat of russet. Season, middle of September. Decays soon.

This variety is synonymous with the Triomphe de Hasselt of the Belgian Collections, the Grosse Van Marum of Bivort, and probably with the Grosse Calebasse of Noisette.

22. *Beurré Judes.*—Size, medium; form, pyriform; calyx, open, in a furrowed basin; stem, rather long, inserted without depression; skin, dull yellowish green, rough and thick, with some russet, stippled with coarse dots; flesh, melting and buttery; flavor, sweet, rich, excellent. Season, early in October, of short duration. Core, medium size; seeds, numerous, long, sharply pointed.

The Beurré Judes has been exhibited for some years, both under this cognomen, and that of Longue de Monkowty, (should be Longue de Nakourts.) The former is correct, as we infer from the foreign catalogues. Mr. Cabot describes the Beurré Judes in 1851, as "without much flavor; rots at the core." It has proved with us a very good fruit, but liable to quick decay.

For a long course of years Mr. Wilder has been increasing his collection of pears, by the introduction of the European novelties. The same enterprise and indomitable perseverance which characterize the public labors of this gentleman, are nowhere more strongly developed than in his attachment to the cultivation of this fruit. Probably no person in this country has corresponded more extensively on this subject, or given his attention more carefully to testing the comparative merits of foreign varieties. We are therefore gratified in being able to embody in this report the above results of his experience, and to learn, in addition, that several kinds which have come into bearing the past season, but which have not been exhibited, give promise of excellence.

Of those which are likely to take a prominent rank, he has furnished the following sketch:—

Pie IX—a large pyramidal, or turbinate, high flavored, buttery pear; ripe in October.

Comte de Paris—a large, obtuse pyriform pear, handsome, and very prolific; October.

Cornelis—large, pyriform, excellent; September.

Willermoz—above medium size, handsome and good; ripe, middle of October.

Retour de Rome—a russet pear of good size, and excellent quality; November.

Emile d'Heyst—large, form of the Dix, very melting and juicy; October.

Beurré Berckmans—regular pear shape, second size, first order; December.

Monseigneur Affré—middle size, a rich, melting pear; November.

Marquis de Bedmar—second size, bergamot shape, fine quality; October.

Madame Elisa—large and handsome; as a late fruit, of good promise; November.

New Pears exhibited by Hovey & Co., 1853.

1. *Kingsessing.*—A new American variety, of large size, roundish obovate form; yellow skin, tinged with red in the sun; flesh, buttery, melting, juicy, rich, high flavored and delicious; September.

2. *Brandywine.*—Another native pear, of the highest quality; size, medium; form, pyramidal; skin, green and brown; flesh, juicy, melting, rich, and peculiarly high flavored and luscious; August.

3. *Beurré Kennes.*—Medium size; form, obtuse pyramidal; skin, green and brown; flesh, melting, juicy, rich and excellent; October.

4. *Beau Present d'Artois.*—Size, large; form, pyramidal; skin, green; flesh, melting, juicy, pleasantly flavored and good; August.

5. *Longue de Monkowty.*—Size, large; form, pyramidal; skin, yellowish, much dotted with large russet spots; flesh, buttery, melting, juicy, very sugary, rich and delicious; October.

6. *Striped Duchess of Angouleme.*—Similar in all respects to the Duchess, but the skin is beautifully striped with green and yellow.

7. *Suffolk Thorn.*—Size, medium; form, roundish; skin, brownish; flesh, melting, juicy, pleasantly flavored and good; October.

8. *Bezi d'Esperin.*—Size, medium; form, obovate; skin, green; flesh, melting, juicy, sprightly, subacid, and excellent; November.

9. *Graslin.*—Size, large; form, obtuse pyramidal; skin, yellow, tinged with red; flesh, melting, juicy, rich, and excellent; November and December.

10. *Delices d'Hardenpont of Belgium.*—Size, large; form, obtused pyramidal; skin, yellow; flesh, half melting, very juicy, sprightly, rich and fine; November.

11. *Ott.*—Size, small; form, obovate; skin, brownish; flesh, melting, very juicy, rich, high flavored and delicious; August.

12. *Beurré Duhaume.*—Size, medium; form, obovate; skin, brownish russet; flesh, melting, juicy, rich and good; November.

13. *St. Menin.*—Size, large; form, pyramidal; skin, green, nearly covered with pale russet; flesh, melting, sweet and good; ripe in August.

14. *Bouvier Bourgermestre.*—Size, medium; form, pyramidal; skin, yellow, smooth, with a fine tinge of red on the sunny side; flesh, melting, very juicy, rich and excellent; October.

The contributions of grapes from Messrs. J. F. Allen, W. C. Strong, Hovey & Co., Breck & Son, M. H. Simpson, A. W. Stetson, A. Bowditch, Nahum Stetson, J. Pritchard, and Mrs. F. B. Durfee, have been liberal during the past season, while at the same time we notice the berries mark a superiority in size and coloring, over those of preceding seasons.

Mr. A. W. Stetson has, during the past year, offered a number of seedlings. Several give good promise—one of which he has named the "Cabot," (in compliment to the President of the Massachusetts Horticultural Society.) It is of so marked a character as to elicit a favorable notice from Mr. Allen, and all will agree that *his* opinions in grape culture may be considered as decisive.

Of grapes for open culture, the Messrs. Hovey have continued to offer the seedling raised by Mr. Bull, without any diminution as to merit, as awarded in previous reports, and the Committee learn that the vines will be procurable at the warehouses of the Messrs. Hovey & Co., and Messrs. Breck & Son.

We are pleased to notice that the attention given to grapes for open culture shows a decided change over the lethargic attention of former years, both in the production of seedlings, and in bringing into notice many choice varieties, heretofore unknown or unnoticed. Of the many seedlings offered we do not feel that this would be a proper time to speak, and wait a mature judgment, and, in passing, would merely say, as an encouragement to growers, that those raised from seeds of the Catawba, have shown a *decided* superiority. But your Committee would feel it a dereliction of duty should they fail at this time to make favorable mention of a superior grape, ripening early in September, and exhibited by Mr. Thos. Waterman. This grape will undoubtedly prove to be the "Winne," synonym "Columbian" or "Buck" grape, of which the late Dr. Bull says, (see N. E. Farmer, July 17, and December 11, 1829,) "The fruit is purple, close set, cluster not very large, form nearer round than oval, pulp about the same as the Isabella, *never sheds its fruit*, and is in eating from eight to ten weeks, a constant and great bearer; it has been judged to have had on one vine at a single time, fifteen bushels."

We herewith subjoin valuable remarks on grapes, from Mr. Allen:—

Salem, December 22, 1853.

Dear Sir,—I have written down, for your use or otherwise, as you may think best, the conclusions I have come to, first, as to those grapes which can be soonest ripened by forcing; and, secondly, those most suitable for retarding.

I believe all cultivators of fruit are aware of the fact, that for cold houses, or houses where a little heat is used for the main crop, that the Black Hamburg (in its varieties,) is the most suitable, and the most generally esteemed. —*Truly, yours,* JOHN FISK ALLEN.

"Grapes that may be forced, and which will mature their fruit in the least period of time;—Pitmaston White cluster; Musque Verdal;—these two ripen the soonest;—Macready's Early White; Black July."

"Grapes, that require the longest time to mature their fruit, and which keep fresh, without wilting, after ripe, several weeks, and are suitable for retarding houses. The first named are the most valuable for this purpose;—Wortley Hall seedling; Syrian; West St. Peters; Queen of Nice, moderate bearer; Prince Albert, this is a poor bearer; Ferrar, or Black Portugal; Portieu Noir; Muscat of Alexandria, in its varieties. This may be thought the best in quality, but it dries more than either of the before named. This does not injure the flavor, and being a large berry, after arriving at this state, they can be preserved until they become almost, if not quite, raisins.

The old Black Hamburg will keep with some wilting, and the Wilmot's New, (the last season of 1853,) kept better than either of the Hamburgs. The Victoria and Wilmot's No. 16, decayed soon after fully ripe.

The old Black St. Peters and the Black Prince, although keeping better than last year, are very inferior to those advised for the retarding house.

Zinfindal dries badly, but when fully ripe, before this process begins, the flavor remains fine.

For out-door cultivation I have proved that the Diana grape will ripen on an eastern exposure, where the Isabella cannot be matured. I think the Committee cannot err in recommending this for extensive cultivation for market. It is now, after many years' trial, fairly tested. It is frequently a slow grower for the first and second season, but after this a very strong one.

Cabot Grape.—A seedling, raised by Mr. A. W. Stetson of Braintree. It is no doubt a cross of Grizzly Frontignan and Black Hamburg; the seed of the first named variety having produced the vine. The bunch is long, with firm, short shoulders. The berries are medium size, round and black, with a thick bloom. In flavor, Musque, but with much spirit, more so perhaps, than some would like; this quality can always be tempered by suffering the fruit to remain on the vine until perfectly ripe, when the grapes with this characteristic become quite sweet. The specimens exhibited thus far have been ripened in a pot, and the vine has produced and matured a large crop, for a vine so situated. It may be considered a seedling of much promise."

June 11th, and subsequently, Mr. Isaac Fay made a fine display of numerous baskets of his seedling strawberry, to which he has given the name of "Jenny Lind," said, by the producer, to be quite productive, of good size, and fine flavor. Should it continue to maintain the character of productiveness it will prove a desirable variety.

June 21st.—M. H. Simpson presented a strawberry, called "Dr. Durfee's seedling," of a rich sparkling flavor, with berries of an extra large size, and though somewhat lacking in weight, it is not "hollow-hearted." Mr. Bowditch made a fine display of "Coe's Transparent cherry," of which previous mention has been made. The tree continues to show signs of great productiveness. This, added to the great beauty of the fruit, will make it a desirable and choice variety, for even the smallest collection. The Messrs. Hovey presented at our weekly exhibitions, the Seedling cherry heretofore mentioned, fully sustaining its former reputation; and this being the fifth year of offering it, the Committee awarded the Appleton gold medal, valued at $40, as the best seedling, after a trial of five years.

Messrs. Hyde & Son exhibited "Peirce's seedling," a large, dark-red cherry, very late in ripening, of a fine flavor, and said to be remarkably productive. The Messrs. Hyde represent the tree as being very handsome as a "shade-tree," partaking much of the form of the horse-chestnut, with large and broad leaves, which would certainly be an additional inducement, combining, as it is said to, the advantage of a fine shade and good fruit.

July 2.—Hon. M. P. Wilder exhibited Duchesse de Pallua cherries, of a fine flavor, and represented as very productive. On the same day he exhibited twenty varieties of strawberries from imported vines, and out of the whole number only three were considered by him as worthy of cultivation, viz.: "Hericart de Thury," "Marechal de la Cour," and "Barnes's New Large White," which, as exhibited, certainly proves to be the largest and finest of the white varieties.

Mr. Elijah Myrick exhibited Bigarreau de Mezel cherries, of an extra size, under some new name. The same cherry has been received from Europe, under the name of Bigarreau Gabaulis, and Monstreuse de Bavay, and is *identical* with the Waterloo, sent to Mr. Wilder from Mr. Downing's nursery some fifteen years since.

Sept. 3.—Mr. A. D. Webber presented seedling melons, grown in open culture. It is a cross between the Beechwood and Christiana. From its great productiveness, early maturity and rich melting flavor, the Committee are of opinion that they can recommend this variety in confidence of its resulting in entire satisfaction to the cultivator.

We are ready to bear testimony in favor of the seedling strawberry by Hon. Samuel Walker, so fully and meritoriously spoken of in previous reports.

As previously stated in the preceding report, we cannot commend a general culture of the gooseberry, with the exception of "Houghton's Seedling," on account of the devastating influence of the mildew. There has been only one contributor who has succeeded in making a large display during the season, and his (Mr. Alexander McLellan's) contributions consisted of some twenty-five varieties, well grown—but by what process he was enabled to avoid the usual baneful effect of the mildew, we did not learn.

As a general matter of note, the show of strawberries and raspberries has been meritorious. Of the former, the most extensive shows have consisted of Hovey's Seedling and Boston Pine, and of the latter, decidedly the best have been made with Knevet's Giant.

The Committee notice that the number of contributions of the "Improved High Blackberry," has but slightly increased over the previous year; and though they *strenuously* urged a general culture of this choice fruit, in their previous report, they still continue to see evidence confirming their former opinion. Since the blackberry is so easily propagated by a division of the root into small sections, it can readily be increased to an almost unlimited extent.

Of the plum crop, we have to record an almost entire failure the past season.

And we have to record the same difficulty in the apple, as a general crop; though there have been a few isolated cases in which specimens have been presented, sufficient to cover the rules for prizes at the exhibitions. We would instance in point of a general failure, and believe it is in accordance with the crop throughout New England. During nearly every year since the establishment of the Society, the Hon. B. V. French has carried off the premium for the "largest and best collection," offering hundreds of varieties in competition, while the past season no award has been made for a large and extensive collection, and Mr. French has not been able to show one where hundreds previously adorned the tables at our Annual Exhibition. The only variety of apple worthy of particular note, exhibited the past season, was the "Size," a seedling from W. A. Andrews, Dover, N. H., (by Messrs. Hovey & Co.,) of which a few dozen were offered, and of so rich a coloring as to prove the main attraction in the fruit department. This was on the 21st of May, giving evidence that it is a late keeping variety. On testing it proved abundantly juicy, and of a rich flavor. In size, it is above medium; a high, warm, rich red on a yellow ground; deep red to the sun, and, for its great beauty *alone*, must prove a desirable table fruit.

It might not be deemed the province of this Committee at this time, and in this place, to enter fully into the feasibility of growers undertaking the cultivation of the apple extensively, other than with local or tried varieties—such as have their habitations hereabouts, or, in other words, seedlings produced in this vicinity—it is a subject deserving attention when newly planting an orchard, and we would advise such persons to look about and learn what varieties have done well in their neighborhood—for trees have a habitation.

THE ANNUAL EXHIBITION for the past year was held under the large pavilion on the Common, and proved an object of greater attraction than did that of 1852, which by many had been deemed unapproachable. Many new contributors came in, successfully carrying off the award over those who for years had been recipients, showing conclusively, that with a small allotment of ground, *well cared for*, the finest specimens can be produced for competition, under the head of "the best twelve specimens," and "best single dishes." So far as the pear was concerned, better growth of all specimens was visible on every side.

It is to be hoped that arrangements may be made the coming year, by which the exhibition may be continued for a greater length of time, enabling strangers to avail themselves, when several of the leading societies may chance to assign the same day for the opening—and also giving the members an opportunity to visit other exhibitions occurring about the same time.

For the Committee, Eben Wight, *Chairman.*

REPORT OF THE FLOWER COMMITTEE FOR 1853.

[Omitted in our last No.]

The Committee recommend a gratuity of fifty dollars to J. F. Allen, for the introduction and successful cultivation of the Victoria Regia, or Royal Water Lily. The Committee have made repeated visits at Mr. Allen's, in Salem, and witnessed with great satisfaction the growth and development of both leaf and flower of this rare and wonderful plant: they have also seen the flower and leaf at various exhibitions at the Horticultural rooms. Considering the unsparing pains, and great expense incurred, in preparing for the cultivation of the plant, the Committee are unanimous in recommending this amount to Mr. Allen.

The Messrs. Hovey have exhibited a number of beautiful seedling camellias; one of them, which had been previously exhibited, was very superior, and worthy of special notice; it was very much admired for its brilliancy of color and perfection of shape.

The Messrs. Winship also exhibited a beautiful striped seedling camellia, much admired.

The Committee hope to see Messrs. Hoveys' plant when in bloom, the coming season, when they propose to give a full description; and if its high character is sustained, shall recommend it to the Society as worthy the premium offered for that object.

For the Committee, Joseph Breck, *Chairman.*

Saturday, January 7, 1854.—The stated quarterly meeting of the Society was held to-day,—the President in the chair.

The Committee for Establishing Premiums and the Garden Committee submitted their schedules for premiums for 1854, which were accepted.

On motion of C. M. Hovey, it was voted that the Publication Committee be requested to consider the propriety of publishing so much of the Proceedings of the Society as they think important, and report at another meeting.

Mr. Walker, from the Committee appointed to report upon the grafting trees of Mr. I. Babbitt, submitted a report, offering Mr. Babbitt the Appleton Gold Medal, upon his depositing with the Society a receipt for its composition, to be made such use of as they may deem proper.

The Committee appointed to nominate a Committee of Arrangements for 1854, reported a list of names, which was accepted, and the following members were appointed a Committee:—

Dr. E. Wight, J. Breck, J. Lovett, C. M. Hovey, W. R. Austin, E. A. Strong, P. B. Hovey, A. Bowditch, W. C. Strong, H. Bradlee, J. W. C. Hyde, A. McLennan, and A. C. Bowditch.

Adjourned one week, to January 14.

SCHEDULE OF PRIZES FOR 1854.

AMOUNT APPROPRIATED, TWO THOUSAND FIVE HUNDRED AND TWENTY DOLLARS.

PROSPECTIVE PRIZES,

For objects to be originated subsequent to A. D. 1846, and which, *after a trial of five years*, shall be deemed equal, or superior, in quality and other characteristics, to any now extant.

For the best seedling	Pear, the Society's large Gold Medal, valued at	$60 00
" " " "	Apple, " " " "	60 00
" " " "	Hardy Grape, " " "	60 00
" " " "	Plum, the Appleton Gold Medal,	40 00
" " " "	Cherry, the Lowell Gold Medal,	40 00
" " " "	Tree Pæonia, the Appleton Gold Medal,	40 00
" " " "	Herbaceous Pæonia, the Lowell Gold Medal,	40 00
" " " "	Potato, the Society's large Gold Medal,	60 00

After a Trial of Three Years.

For the best seedling	Strawberry, the Lyman Plate,	50 00
" " " "	Raspberry, the Bradlee Plate,	40 00
" " " "	Hardy Rose, the Society's large Gold Medal,	60 00
" " " "	Camellia, the Society's large Gold Medal,	60 00
" " " "	Azalea Indica, the Lowell Gold Medal,	40 00
" " " "	Blackberry,	40 00
" " " "	Gooseberry,	30 00
" " " "	Currant, Red, or White,	30 00

PRIZES FOR GARDENS, GREENHOUSES, &c.

AMOUNT APPROPRIATED, TWO HUNDRED DOLLARS.

ORDERED, *That the following Prizes, to be awarded in* 1854, *be offered by the Society, viz.:—*

For the most economically managed, best cultivated, and most neatly kept Garden or Grounds, through the season,	$25 00
For the second best,	15 00
For the most economically managed, best cultivated, and most neatly kept Fruit Garden, through the season,	25 00
For the second best,	15 00
For the most economically managed, best cultivated, and most neatly kept Flower Garden, through the season,	20 00
For the second best,	10 00

For the most economically managed, best cultivated, and most neatly kept Vegetable Garden, through the season,	$20 00
For the second best,	10 00
For the best managed, most economically conducted, and well kept Greenhouse, through the season,	20 00
For the second best,	10 00
For the best managed, most economically conducted, and well kept Grapery, through the season, with or without fire heat,	20 00
For the second best,	10 00

The Rules and Regulations are the same as last year. All applications to visit gardens must be made before May 1.

PRIZES FOR FRUITS DURING THE SEASON.

AMOUNT APPROPRIATED, SIX HUNDRED AND TWENTY DOLLARS.

For the best and most interesting exhibition of Fruits during the season, the Lowell plate, valued at	$20 00
For the second best,	12 00
APPLES.—For the best twelve Summer Apples, on or before the last Saturday in August,	6 00
For the next best,	4 00
For the best twelve Autumn Apples, on or before the last Saturday in November,	6 00
For the next best,	4 00
For the best twelve Winter Apples, on or before the third Saturday in December,	6 00
For the next best,	4 00
APRICOTS.—For the best twelve, on or before the last Saturday in August,	5 00
For the next best,	3 00
BLACKBERRIES.—For the best specimens, not less than two boxes,	5 00
For the next best,	3 00
For the next best,	2 00
CHERRIES.—For the best specimens, not less than two boxes,	5 00
For the next best,	3 00
For the next best,	2 00
CURRANTS.—For the best specimens, not less than two boxes,	5 00
For the next best,	3 00
FIGS.—For the best twelve specimens,	5 00
For the next best,	3 00
GOOSEBERRIES.—For the best specimens, not less than two boxes,	3 00
For the next best,	2 00
GRAPES.—For the best specimens, grown under glass, on or before the first Saturday in July,	8 00

For the next best,	$6 00
For the next best,	4 00
For the best specimens, grown under glass, subsequently to the first Saturday in July,	8 00
For the next best,	6 00
For the next best,	4 00
For the best specimens of Isabella Grapes,	5 00
For the next best,	3 00
For the best specimens of Diana Grapes,	5 00
For the next best,	3 00
For the best native grape of any other variety,	5 00
MUSK MELON.—For the best Musk Melon, open culture, on or before the last Saturday in September,	5 00
For the next best, raised by open culture, on or before the last Saturday in September,	3 00
NECTARINES.—For the best twelve specimens,	5 00
For the next best,	3 00
PEACHES.—For the best twelve specimens, grown under glass, on or before the second Saturday in July,	6 00
For the next best,	4 00
For the best twelve specimens, grown in open culture,	5 00
For the next best,	4 00
For the next best,	2 00
PEARS.—For the best collection, not exhibited before this year, with a written description of the same, the Society's plate,	10 00
For the next best,	6 00
For the best twelve Summer Pears, on or before the last Saturday in August,	6 00
For the next best,	4 00
For the best twelve Autumn Pears, on or before the last Saturday in November,	6 00
For the next best,	4 00
For the best twelve Winter Pears, on or before the third Saturday in December,	8 00
For the next best,	6 00
For the next best,	4 00
PLUMS.—For the best specimens, not less than two boxes,	4 00
For the next best,	3 00
For the next best,	2 00
QUINCES.—For the best twelve specimens,	4 00
For the next best,	2 00
RASPBERRIES.—For the best specimens, not less than two boxes,	5 00
For the next best,	3 00
For the next best,	2 00
STRAWBERRIES.—For the best specimens, not less than two boxes,	6 00
For the second best,	4 00
For the third best,	3 00

PRIZES FOR FRUITS.

To be awarded at the Annual Exhibition.

Apples.—For the best thirty varieties, of twelve specimens each, the Lyman Plate, valued at	$30 00
For the second best,	20 00
For the third best,	10 00
For the best twelve varieties, of twelve specimens each, the Society's Plate, valued at	20 00
For the second best,	15 00
For the third best,	12 00
For the fourth best,	8 00
For the best dish of Apples, twelve specimens of one variety,	6 00
For the second best,	5 00
For the third best,	4 00
For the fourth best,	3 00
Pears.—For the best thirty varieties, of twelve specimens each, the Lyman Plate, valued at	30 00
For the second best,	20 00
For the third best,	10 00
For the best twelve varieties, of twelve specimens each, the Lyman Plate, valued at	20 00
For the second best,	15 00
For the third best,	12 00
For the fourth best,	8 00
For the best dish of Pears, twelve specimens of one variety,	6 00
For the second best,	5 00
For the third best,	4 00
For the fourth best,	3 00
Assorted Fruit.—For the best basket of Fruit, of various kinds,	8 00
For the second best,	4 00
Grapes.—For the best five varieties, two bunches each,	12 00
For the second best five varieties, two bunches each,	8 00
For the third best five varieties, two bunches each,	5 00
For the best two varieties, two bunches each,	6 00
For the second best,	4 00
For the third best,	2 00
Peaches.—For the best dish, of not less than twelve,	5 00
For the second best,	3 00

☞The Prizes and Gratuities will be awarded on the following days:—

For Cherries, forced Grapes, forced Peaches, and Strawberries, on the last Saturday in July.

For Summer Apples, Apricots, Blackberries, Currants, Gooseberries, Summer Pears, and Raspberries, on the last Saturday in August.

For Foreign and Native Grapes, Nectarines, Peaches, Plums, and Musk Melons, on the last Saturday in October.

For Autumn Apples, Figs, Autumn Pears, and Quinces, on the last Saturday in November.

For Winter Apples, Winter Pears, New Pears, and for the "Exhibition during the season," on the third Saturday in December.

☞ Competitors for Prizes are particularly referred to the Rules and Regulations, which will be strictly adhered to by the Committee.

PRIZES FOR PLANTS, FLOWERS AND DESIGNS.

Amount appropriated, Seven Hundred Dollars.

DISPLAY OF GREENHOUSE PLANTS, IN POTS.

To be exhibited at the opening of the Hall, on the second Saturday in May:—

Pelargoniums.—For the six best varieties, grown in pots, a premium of	$8 00
For the second best,	6 00
For the third best,	4 00
Fuchsias.—For the best six varieties, in pots,	6 00
For the second best,	4 00
Calceolarias.—For the best six varieties,	5 00
For the second best,	3 00
For the third best,	2 00
Cinerarias.—For the best six varieties,	3 00
For the second best,	2 00
Heaths.—For the best varieties,	5 00
For the second best,	3 00
For the third best,	2 00
Greenhouse Plants.—For the best display, of not less than ten pots, regard to be had to new and rare varieties, and well grown specimens, a prize of	15 00
For the second best,	12 00
For the third best,	10 00
For the fourth best,	8 00
For the fifth best,	5 00
Cut Flowers.—For the best display, a prize of	6 00
For the second best,	5 00
For the third best,	4 00
For the fourth best,	2 00
Hyacinths.—Prizes to be awarded second Saturday in May.	
For the best display, not less than twenty varieties,	5 00
For the second best,	3 00
Tulips.—Prizes to be awarded the third Saturday in May.	
For the best thirty distinct varieties, a prize of	8 00
For the second best,	6 00
For the third best,	3 00

PANSIES.—Prizes to be awarded the fourth Saturday in May.	
For the best twelve distinct varieties, a prize of	$4 00
For the second best,	3 00
For the third best,	2 00
HAWTHORNS.—Prizes to be awarded fourth Saturday in May.	
For the best display, a prize of	3 00
For the second best,	2 00
HARDY AZALEAS.—Prizes to be awarded fourth Saturday in May.	
For the best display, a prize of	6 00
For the second best,	4 00
For the third best,	3 00
SHRUBBY PÆONIES.—Prizes to be awarded fourth Saturday in May.	
For the best six varieties, a prize of	5 00
For the second best,	4 00
For the third best,	3 00
HERBACEOUS PÆONIES.—Prizes to be awarded second Saturday in June.	
For the best ten varieties, having regard to the number of varieties, a prize of	5 00
For the second best,	4 00
For the third best,	3 00
PINKS.—Prizes to be awarded third Saturday in June.	
For the best six distinct varieties, a prize of	5 00
For the second best,	3 00
For the third best,	2 00
HARDY ROSES.—Prizes to be awarded third Saturday in June.	
CLASS I.	
For the best thirty distinct varieties, a prize of	8 00
For the second best,	6 00
For the third best,	4 00
For the fourth best,	3 00
CLASS II.	
For the best twelve distinct varieties, a prize of	5 00
For the second best,	3 00
For the third best,	2 00
CLASS III.	
HARDY PERPETUAL ROSES.—For the best ten varieties, a prize of	5 00
For the second best,	4 00
For the third best,	3 00
PRAIRIE ROSES.—For the best display, not less than six varieties, a prize of	5 00
For the second best, not less than four,	4 00
For the third best, not less than four,	3 00
SUMMER PHLOXES.—Prizes to be awarded second Saturday in July.	
For the best ten distinct varieties,	5 00
For the second best,	4 00
For the third best,	3 00

Carnations and Picotee Pinks.—Prizes to be awarded third Saturday in July.	
For the best ten varieties, a prize of	$5 00
For the second best,	4 00
For the third best,	3 00
Hardy Rhododendrons.—For the best display of the season, a prize of	6 00
For the second best,	4 00
For the third best,	3 00
Double Hollyhocks.—Prizes to be awarded third Saturday in July.	
For the best twelve varieties in spikes, a prize of	5 00
For the second best,	4 00
For the third best,	2 00
Double Balsams.—Prizes to be awarded second Saturday in August.	
For the best eight varieties in spikes, a prize of	3 00
For the second best,	2 00
For the third best,	1 00
Phloxes.—Prizes to be awarded third Saturday in August.	
For the best ten distinct varieties, a prize of	5 00
For the second best,	4 00
For the third best,	3 00
German Asters.—Prizes to be awarded first Saturday in September.	
For the best ten varieties, not less than twenty-five flowers,	4 00
For the second best,	3 00
For the third best,	2 00

BOUQUETS, WREATHS, DESIGNS, &c.

Prizes to be awarded at the Annual Exhibition.

Vase Bouquets.—For the best pair, suitable for the Bradlee Vases, a prize of the Bradlee Plate, valued at	10 00
For the second best,	6 00
For the best pair for the Society's Marble Vases,	10 00
For the second best,	6 00
Parlor Bouquets.—For the best pair suitable for the parlor,	8 00
For the second best,	6 00
For the third best,	5 00
For the fourth best,	3 00
Cut Flowers.—For the best display and best kept through the exhibition, a prize of	6 00
For the second best,	5 00
For the third best,	4 00
For the fourth best,	3 00

Pot Plants.—For the best display, of not less than twenty pots, a prize of	$12 00
For the second best,	10 00
For the third best,	8 00
For the fourth best,	5 00
Coxcombs.—For the best six pots, a prize of	3 00
For the second best,	2 00
Balsams.—For the best six pots, a prize of	3 00
For the second best,	2 00
Dahlias.—Prizes to be awarded fourth Saturday in September.	
Division A.	
Premier Prize.—For the best twelve dissimilar blooms, a prize of	8 00
Specimen Bloom.—For the best flower,	3 00
Various Colors.—For the best yellow, buff, or orange; purple or maroon; crimson or claret; very dark; white; edged or tipped; scarlet; pink or rose; striped lilac, a prize of $1 00 each,	12 00
Division B.—Class I.	
For the best twenty-four dissimilar blooms,	7 00
For the second best,	5 00
Class II.	
For the best eighteen dissimilar blooms,	6 00
For the second best,	4 00
Class III.	
For the best twelve dissimilar blooms,	5 00
For the second best,	3 00
Herbaceous Perennials.—For the best display through the season, a prize of	8 00
For the second best,	6 00
For the third best,	4 00
Annuals.—For the best display through the season, a prize of	8 00
For the second best,	6 00
For the third best,	4 00
Camellias.—Prizes to be awarded third Saturday in January.	
For the best twelve varieties of cut flowers with foliage, a prize of	8 00
For the second best,	6 00
For the third best,	4 00
Greenhouse Azaleas.—Prizes to be awarded second Saturday in March.	
For the best six varieties in pots,	8 00
For the second best,	6 00
For the third best,	4 00
Flowering Shrubs.—For the best display through the season, a prize of	8 00
For the second best,	6 00
For the third best,	4 00

Bouquets.—For the best display for the season,	$6 00
For the second best,	5 00
For the third best,	3 00
Amount appropriated as Gratuities, to be awarded at the Weekly Exhibitions,	90 00

PRIZES FOR VEGETABLES.

Amount appropriated, Two Hundred and Fifty Dollars.

Asparagus.—For the earliest and best, not less than three bunches, a prize of	$3 00
For the second best,	2 00
Beets.—For the best (pure blood beet,) during the season, not less than twelve roots, a prize of	3 00
Broccoli.—For the best three heads, a prize of	5 00
Beans.—For the best and earliest peck of string beans, a prize of	3 00
For the best and earliest Lima beans, not less than two quarts,	3 00
For the best and earliest variety of shell beans,	3 00
Cabbage.—For the best Drumhead cabbage, during the season, not less than three heads, a prize of	5 00
For the second best,	3 00
For the best Savoy cabbage, during the season, not less than three heads, a prize of	3 00
For the second best,	2 00
Carrots.—For the best exhibited, a prize of	2 00
Cauliflowers.—For the best and largest, during the season, not less than three heads, a prize of	5 00
For the second best,	3 00
Celery.—For the best and largest blanched, not less than six roots, a prize of	5 00
For the second best,	3 00
Corn.—For the best and earliest sweet corn, not less than twelve ears, a prize of	3 00
For the second best,	2 00
Cucumbers.—For the best pair under glass, previous to the first Saturday of June, a prize of	5 00
For the second best,	3 00
For the best and earliest of open culture,	3 00
Egg Plants.—For the best display during the season, a prize of	5 00
For the second best,	2 00
Lettuce.—For the best six heads, before the first Saturday in July, a prize of	3 00
For the second best,	2 00
Potatoes.—For the best *new* seedling, of superior quality, for the table, a prize of	10 00
For the best and earliest peck, previous to August 1,	3 00
For the second best,	2 00

PEAS.—For the best and earliest peck in June, a prize of	$3 00
RHUBARB.—For the largest and best, previous to the first Saturday in July, not less than twelve stalks, a prize of	5 00
For the second best,	3 00
SQUASHES.—For the best pure Canada squashes, not less than six in number, a prize of	3 00
For the greatest variety exhibited during the season,	5 00
TOMATOES.—For the best and earliest, not less than one dozen,	3 00
VEGETABLES.—For the best display and greatest variety at the weekly exhibitions, during the season,	5 00
For the second best,	3 00
For the best display and greatest variety at the annual exhibition,	10 00
For the second best,	8 00
For the third best,	6 00
For the fourth best,	4 00
For any new variety of vegetable suitable for the table, and worthy of cultivation, other than seedling potatoes,	5 00

To be awarded at the Annual Exhibition.

MAMMOTH SQUASH.—For the largest and best, the Society's Silver Medal,	
For the second best,	3 00
PUMPKINS.—For the largest and best, the Society's Silver Medal,	
For the second best,	3 00
For gratuities,	85 00

The Rules and Regulations are the same as last year.

Jan. 14.—An adjourned meeting was held to-day,—M. P. Wilder, Chairman, pro tem.

Mr. Wilder, from the Finance Committee, made a report, showing the following condition of the Society:—

Receipts for the year 1853.

Balance in hands of Treasurer,	$240 43
Interest from Massachusetts Hospital Life Insurance Company,	220 00
Dividend on Boston and Worcester Railroad Stock,	371 00
Rent of store, $1000; of hall, $628 26,	1628 26
Assessments collected,	450 00
Coupons from Passumpsic Railroad,	300 00
Receipts of Mount Auburn Cemetery,	2130 99
Interest on 22 shares Portland and Saco Railroad,	120 00
Receipts from Annual Exhibition,	400 00
Rents from Real Estate, (new purchase,)	775 00
Miscellaneous receipts,	395 77
	$7031 45

Payments for the year 1853.

Taxes on Real Estate,	$311 60
Interest on Mortgage, (J. P. Bradlee,)	600 00
Interest on Mortgage, (Woodbury,)	570 00
Premiums and gratuities,	1854 00
Bill of plate to S. Walker and others,	250 00
Salaries,	500 00
Insurance,	140 50
Printing, Advertising, &c.,	325 84
Miscellaneous Bills,	667 70
Payments of loans,	700 00
Balance on hand,	1111 81
	$7031 45

Estimate of the Society's Property.

Original purchase and hall,	$36,000 00	
Additional purchase, 1852,	12,000 00	
Furniture, Library, &c.,	4,029 00	
Appleton fund,	1,000 00	
Lyman fund,	1,000 00	
Bradlee fund,	1,000 00	
Lowell fund,	1,000 00	
Lyman bequest, (in stocks,)	10,000 00	
20 shares Passumpsic Railroad,	200 00	
		$68,029 00

Liabilities of the Society.

Mortgage to J. P. Bradlee,	$10,000 00	
Mortgage to Mr. Woodbury, (new purchase,)	9,500 00	
Temporary loan,	600 00	
		20,100 00
Leaving a balance of		$47,929 00

The Special Committee, appointed to settle with Mt. Auburn, made the following Report:—

Sales of lots in Mt. Auburn Cemetery,	$25,569 63
Expenses of superintendence, &c.,	1,400 00
Leaving a balance of	$24,169 63
Society's proportion of one quarter,	6,042 41

Which has been paid into the hands of the Treasurer.

It was then voted that the Finance Committee pay $5000 upon the mortgage of the new purchase of real estate.

C. M. Hovey, Chairman of the Library Committee, made a report, which was accepted.

Adjourned one week, to January 21.

HORTICULTURAL OPERATIONS

FOR FEBRUARY.

FRUIT DEPARTMENT.

January has been a stormy, cloudy, cool and unpleasant month, with a very small proportion of sunny weather, and great quantities of snow, if we include that which fell on the opening of the year. It has been a severe month for forcing operations, requiring stronger fires than usual both day and night, with but little bright weather to air abundantly and counteract the effects of fire heat. Vegetation has come forward slowly, and with a less vigorous appearance than usual; though a warmer February may enable the careful gardener to obviate any very bad effects from such long-continued dull weather. Advantage should be taken of every favorable opportunity to accomplish this object.

Grape Vines, in the earliest houses, will now be in full bloom, or, perhaps, begin to swell up their fruit. In either case they will require the greatest attention. Increase the temperature 5° or more at night, and keep up a uniform genial atmosphere, by repeated waterings of the floor, &c., in all good weather. Tie out the laterals carefully, and when they have grown beyond the fruit, nip off the ends. If they are forward enough to need thinning, attend to this at once. Vines in the greenhouse or grapery will begin to swell their buds this month; as soon as this is perceived give them a good syringing, and continue it till they are well broken. If any of them show a disposition to break unevenly, depend the ends of the vines to counteract it, and check the flow of sap to the top.

Peach Trees, in pots, will now begin to flower, and should be placed in an airy place to secure a good setting of the fruit. Additional trees may be brought in for a succession.

Figs, in pots, now placed in a warm house will soon break and produce an early crop.

Pruning Trees in the open garden may be commenced the last of this month, in favorable weather; by beginning early the heaviest part of the work may be accomplished before other necessary labors commence.

Scions of fruit trees may yet be cut and pruned.

Root Grafting may be forwarded now, where it is an object to do this kind of work.

FLOWER DEPARTMENT.

As the season advances, and there is more solar heat, plants will begin to feel its effects. All kinds will show a disposition "to break," and will require more attention than when in a dormant state. Some will need repotting, others a greater abundance of water; some a severe pruning, and others only sufficient to give them a comely shape. A good temperature should be kept up, and an abundance of air given to prevent injurious effects from a greater heat. Keep all the plants clean. Fumigate often, and forward all kinds of work as much as possible.

CAMELLIAS will be in all their glory this month. It is the best time to see a fine bloom. Water now rather more freely than heretofore, and syringe the plants in good weather. Give liquid guano occasionally to encourage a vigorous action of the roots, which makes them break stronger. Head in all crooked and ill-shaped plants—they bear the knife well. Inarching and grafting may be done now.

PELARGONIUMS shifted last month, and now growing vigorously, should have their branches neatly tied out, and put into good shape. Water rather sparingly and keep the plants in a light airy situation.

JAPAN LILIES just potted will not require any water until the shoots appear above the soil; keep in a cool place. A fresh lot may be potted this month for a succession.

CINERARIAS, growing vigorously, will require another shift into larger pots. Fumigate often to kill the green fly.

ACHIMENES, GLOXINIAS, &c., may now be potted thickly and started into growth. Afterwards pot them off singly into small pots.

AZALEAS will now begin to flower, and should be more liberally watered, and occasionally have a good washing with the syringe.

MONTHLY CARNATIONS may have a shift now into larger pots.

HEATHS which have filled the pots with their roots should have a shift into a larger size.

VERBENAS intended for fine flowering plants should be shifted into larger pots, and trained to stakes or a trellis.

PANSIES raised from seeds may now be potted off singly in small pots.

SALVIAS, HELIOTROPES, CUPHEAS, &c., in small pots, may have a shift into larger size. Keep up the propagation of fresh stock.

PLANTS of all kinds beginning to grow should be looked over, and if they need shifting and pruning in, it should be done immediately.

SEEDS of Globe amaranthus, stocks, sweet alyssum, or other desirable annuals, may be sown now, and brought forward for early flowering in the open ground.

GLADIOLUSES, and other bulbs, may be potted early for blooming in June and July.

VEGETABLE GARDEN.

Now is the season to commence operations in the forcing department. Hot beds should be got ready at once, and preparations be made for sowing all the choice kinds of vegetables. We need not repeat the best modes of making such beds, as they are familiar to nearly all. As soon as they are ready, and the rank heat exhausted, sow seeds of cucumbers, tomatoes, egg plants, lettuces, &c., &c. A bottom heat of 80° to 90° is just the thing.

THE MAGAZINE

OF

HORTICULTURE.

MARCH, 1854.

ORIGINAL COMMUNICATIONS.

Art. I. *Does our American Climate injuriously affect the Foreign Fruits?*

As long ago as 1835, Van Mons sent to this country more than ONE HUNDRED AND FIFTY of his seedling pears, named and unnamed, and since then, fully TWO HUNDRED AND FIFTY more have been received from Belgium, France and England, making, in all, four hundred varieties of pears. Large as this number appears, we have greatly understated it, for the late Robert Manning had at one time more than five hundred sorts in his collection; and since his death upwards of two hundred more have been added to our catalogues. But for our present purpose we are willing to take the first number.

Now, out of the above four hundred varieties, all received with a high reputation, how many have been found, up to this time, deserving of general cultivation? We estimate the number far higher than some cultivators, and are willing to believe, when they have been thoroughly tested by proper culture, they will be found to greatly exceed the limits of most fruit growers. But the general impression is, that not more than *fifty* out of all the great variety of pears we possess, are worth growing; some say only *twenty-five;* some not more than a *dozen;* and there are others who think the entire cream of all is concentrated in the Bartlett, Seckel, Louise Bonne of Jersey, and Le Cure!

If such is the fact, or anything like it, how shall we account for the failure of such an immense number of kinds, embracing the numerous seedlings of Van Mons, at one time so famous, selected from upwards of 80,000 trees of the fourth and fifth generations, raised through a period of nearly fifty years? To us this appears a question of much importance, and worthy of considerable attention. The cause of this failure should be, if possible, ascertained, for very little reliance can be hereafter placed upon our foreign sorts, if only so small a number are to prove valuable.

But compare these results with those of our native fruits, and as we have taken only the foreign pears, we shall confine ourselves to the same fruit. Previous to 1835 we had not more than six or eight good native varieties; now we have nearly ONE HUNDRED, and these, we think we may safely say, have been selected from less than 10,000 wildings or seedlings, probably from less than half that number. Now, although there are a variety of opinions as to the merit of all of them, some being quite new and little known, will it not be admitted that they are far superior to an equal number of foreign kinds, as they average? If so, then it would appear that our native sorts are better adapted to our climate, or that we have not yet learned how to cultivate the foreign ones.

In the climate of Great Britain, the Seckel, Dearborn's Seedling, the Lewis, and Prince's St. Germain, succeed admirably as standard trees, while the White Doyenné, St. Germain, Easter Beurré, Glout Morceau, and others, according to Lindley, one of the most reliable writers, will attain perfection only when trained on an *east* or *southeast wall.* In Jersey, with a climate not so warm as many portions of our Middle States, the Chaumontelle grows to a great size, and is one of the finest of all pears. In Boston the White Doyenné has always been as perfect as possible. Such being the fact, does it not plainly show that climate has much to do with the growth of fine fruit?

This subject has attracted some attention recently, and writers have argued that a fruit raised in any particular locality is the best fruit for that locality; for instance, the Newtown Pippin does best on Long Island; the Spitzenberg, on the Hudson; the Bellflower, in Pennsylvania; the Baldwin, at Boston, &c. We are not ready to say that this is the fact, though it may appear to be so; but we are inclined to the belief that most fruits flourish best in a climate similar to that in which they originated, and that locality alone has much less to do with their growth than atmospheric influences, which are often the same in places very widely separated.

All who have cultivated our finer pears, such as the Passé Colmar, Beurré Rance, Easter Beurré, St. Germain, White Doyenné, Van Mons Leon le Clerc, and similar sorts, will admit that they cannot be produced under ordinary treatment, like the Lawrence, Seckel, Andrews, Swan's Orange, Sheldon, Heathcot, Tyson, &c. The tendency of the former to spot, mildew, crack, &c., is a constant source of disappointment to the cultivator; and it is only when they have the highest treatment that they produce a crop worthy of their great reputation. The Beurré Rance, which at Angers, in France, is the finest of all late pears, has never yet, to our knowledge, been grown here scarcely fit to eat.

Though we have been unable to solve the cause of this, we think there are but few cultivators, who have not been convinced that we must sooner or later admit its truth; and who will not acknowledge that many of the finer pears can only be grown under peculiar conditions, and with a great amount of care and labor, certain obstacles being necessary to be overcome before satisfactory results can be obtained. The important question is to know what these obstacles are, that we may be able to remove them.

Some valuable observations have recently been made public by a Swiss writer, which we think are highly important in connection with this subject, and deserving the attention of Pomologists. These observations appear in the form of an essay, read by M. Desor, before a general meeting of the different learned societies of Switzerland, upon the "American climate." A report of it appears in the *N. Y. Tribune*, from which we quote. The object of the essay appears to be to show that "there is something in the climate of this country unfavorable to high development and substantial vigor of the human organization, and that the race must rapidly degenerate in such circumstances, but for the constant infusion of fresh blood from the healthier and more vigorous nations of Europe." The able naturalist brings an array of facts to support his theory. Though on this question we shall not follow him, still, we cannot omit to state that, in our opinion, the North American Indian shows as "substantial a vigor" of constitution and perfect development of form as many of the European race. Our object is simply to place before our readers his remarks on the difference in the climate of Europe and America, and to offer our own views as to the effect of this difference on the growth of fruit.

"He says that when German and Swiss immigrants arrive in New York, they generally find that our climate does not differ much from their own, but that after a time they begin to notice little differences, which compel them, in spite of themselves, to adopt our system of living—a system which on their arrival here they invariably condemn. They know, indeed, that our Northern States lie in nearly the same latitude as Central Europe, and the well-informed among them understand that the isothermal circles coincide still more exactly. Add to this that they learn by experience that the winters in the neighborhood of New York and Boston are about as cold as at Frankfort, Basle or Zurich, and the summers at least as warm, and yet after all there is a difference which they cannot understand.

"The effects of this difference in climate are seen as well in some of the most ordinary operations of every-day life as in its influence on certain trades. Our German immigrants find to their astonishment on a washing-day, that their things dry full twice as quickly, even in the depth of winter, here as in Europe. Accustomed, too, to bake bread for family use only once in two or three weeks, they are necessarily surprised when they discover that here on the second or third day it becomes hard, dry and unpalatable. German housekeepers find, however, that this dryness of our atmosphere has its advantages, inasmuch as vegetables and fruits, of all kinds, are more easily preserved throughout the winter than in their own Fatherland. The Hamburger, although it is colder here at Christmas than in his native city, never sees those frosted windows to which he has been accustomed from childhood, there rarely being sufficient moisture in our atmosphere to produce them. 'Many additional instances of the effect of the American climate on the ordinary routine of life,' observes M. Desor, 'might be given, and I could point out others where it affects the person. For instance, the hair soon loses its natural moisture and becomes dry.'

"But there are other facts equally remarkable. No sooner are the walls of a building plastered than the tenant may move in without any fear of rheumatism or those sicknesses which would be the inevitable consequence of so doing in Europe. So too the plasterer himself can lay on the second coat at once; while on the other hand the upholsterer and pianoforte manufacturer must be very careful in selecting their wood, for what would be amply seasoned in Europe would soon crack and split here. So many instances, however, in which the dryness of our atmosphere exerts its influence on different trades and manufactures will naturally suggest themselves to our readers that we deem it needless to point out more.

"The number of rainy days in the States, if we except perhaps England and Norway, is not less than in Europe generally. But here the air never retains the moisture; no sooner does it cease raining than the hygrometer commences at once to sink, and soon shows that the atmosphere is as dry as ever. This dryness of the American climate is very readily explained by our savan. In America, as in Europe, westerly winds chiefly prevail. They proceed, however, to the coasts of Europe, loaded with the moisture which they have collected during their passage across the ocean. Consequently, rain generally accompanies them. Here, however, the westerly winds reach us only after passing over a whole continent, and when they have lost a large portion of their moisture. Therefore they seldom bring rain with them."

From this it will be seen how great is the difference in the hygrometrical character of the two climates. Notwithstanding our average quantity of rain is nearly *forty inches*, yet we rarely escape a season without a severe and trying drought in some part of it.

The question then is, will the fruits raised in the more even and humid atmosphere of some parts of the continent succeed equally as well in the far drier one of our climate, under the ordinary conditions of soil and treatment? Let us examine. First, take the foreign grape: the experiment has been tried, until it has been nearly abandoned, that the foreign grape cannot be successfully cultivated in the open air with us, on account of the mildew, which invariably ruins them, except in particular locations, principally the protected gardens of our large cities. If atmospheric influence does not materially affect them, why cannot they be as readily grown here as the Isabella? Under artificial culture we can raise them to perfection; with the atmosphere at our command there is no trouble. Next take the peach; as an orchard fruit it cannot be grown with any success, even around Paris; the mildew attacks the trees, and in M. Jamin's garden they looked as if they had just come out of a meal bag. Here is just the reverse of the grape; and the reason is obvious: the peach does not like the humid atmosphere which suits the grape.

But in what way, it may be said, does this affect the pear, a fruit believed to have been originally introduced from Europe, and not indigenous to this Continent, though we have our doubts as regards this generally-received opinion.

We account for it in this wise. Many of the finer varieties of pears have been produced by the highest cultivation; they have grown up in a climate naturally very humid, and have undoubtedly been further stimulated by rich soils and abundance of moisture. No parching winds are experienced to cause a rapid evaporation of sap, and the fruit swells up and ripens off in fine condition. Now, change the location: plant the same tree in our dry climate; drenched with rain to-day, and followed with a high temperature of 90°, which causes a rapid flow of sap, the fruit advances rapidly, till all at once our droughts set in; the moisture of the soil is soon gone; the atmosphere is so dry as to rapidly exhaust the juices of the fruit; it ceases almost to grow, and shows signs of premature maturity; but the rains descend again; the ground is saturated afresh, the sap vessels are again filled to overflowing; the skin of the fruit, already approaching maturity, and unable to expand, bursts open, cracks and splits in every direction; mildew attacks it, the surface no longer having the healthy action necessary to throw it off, and the fruit becomes nearly or quite worthless.

We have carefully watched the progress of many varieties through successive seasons, and have noticed these results. Many pears have kept on growing, though slowly, during a long drought, particularly that of 1853; but within two days after the drenching rains of August, the fruit of some sorts, particularly the Van Mons Leon le Clerc, was split almost in halves, while within ten feet of the same trees, in just such a soil, other sorts, the Swan's Orange in particular, were as perfect and beautiful as they could be raised. We had formed just the same opinion of the cause which M. Desor has so scientifically shown to be a peculiarity of our climate, and had made up our mind that unless this was obviated by some means, many of the best pears could never be successfully cultivated.

We may be in error in taking this view of the case; but we have based our experiments hereafter upon it, and shall be glad to know that our fears have been premature. Fortunately, we believe this difference of climate can be nearly or quite overcome. *Deep and thorough trenching of the soil, which supplies an abundance of moisture, will counteract these atmospheric influences;* and whoever wishes to produce the larger and finer foreign pears must take this course. All who wish plenty of fruit, without much trouble, must rely upon our American varieties; they will grow almost anywhere, better of course in some places than in others, and better still with the same high cultivation given to foreign ones. We wish it to be distinctly understood, however, that we do not say *all* foreign pears require such high culture. On the contrary many of them, like the Bartlett, Beurré d'Anjou, Belle Lucrative, Urbaniste, &c., will grow anywhere with only ordinary care; but with certain sorts, some of which we have before named, we believe no satisfactory results can be anticipated from the same management.

ART. II. *Old Houses and their Enclosures.*

By WILSON FLAGG.

WHEN we are journeying in the country, we cannot avoid remarking that the sight of the finest houses and most highly ornamented grounds is not always attended with the highest pleasure. Villa after villa passes before our eyes, awakening in different degrees the sentiment of admiration. Our eyes are dazzled by the splendor of their richly decorated windows, their Grecian colonnades, and verandahs trained with honeysuckles and bignonias. We are enraptured at the sight of this combination of the beauty of nature and the splendor of art; and pause frequently to indulge an emotion of pride, while we contemplate these evidences of wealth and civilization.

As we proceed further into the country we presently encounter a scene that awakens a different class of emotions, that seem to penetrate more deeply into the soul. An old house, containing two stories in front, with the back roof extending almost to the ground, is seen half protected by the drooping branches of a venerable elm. A Virginia creeper hangs in careless festoons around the low windows, and a white rose-bush grows luxuriantly over the plain board fence that encloses the garden. The house stands a few rods back from the street, and is surrounded in front and on one side by an extensive grass plat, neatly shorn by the grazing animals, while sauntering on their return from pasture. An old barn is near; and the flocks and the poultry seem to enjoy an amount of comfort which we might look for in vain, in the vicinity of a more ornate dwelling-house.

There is an appearance of comfort and freedom about this old house, that renders it a pleasing object to almost every eye. No one can see it without calling to mind the old-fashioned people whom we always suppose to be its occupants. About it and around it we see no evidences of that constraint to which the in-dwellers and visitors of some more fashionable houses must be doomed. The exterior is associated with its interior arrangements, no less than with the scenes around it. We see, in the mind's eye, the wide entry into which the front door opens, the broad and angular stair-case, the window in the upper entry, that looks out upon a rustic landscape dotted with fruit-trees, and patches of ploughed land alternating with green meadow. By the side of the stair-case, on the lower floor, stands an ancient clock, whose loud striking and slow stroke of the pendulum are associated with the old style of low-studded rooms. Perhaps by studying the cause of the pleasant emotions with which we contemplate this old house, we may arrive at the knowledge of a principle that may be turned to advantage, in regulating our own and the public taste.

The charm of these old houses, which are marked by neatness and plainness and by an absence of all pretension, is founded on the natural yearning of every human soul after freedom and simplicity. In them and around them we behold the evidences of a mode of life, which, if we could but rid our hearts of a little *madness*, we should above all choose for ourselves. The human heart naturally attaches itself to those scenes, in which it would be free to indulge its own natural fancies. But there is a habit stronger than nature, derived from our perverted education, that causes us to choose a part that will excite the envy of our neighbors, in preference to one that would best promote our own happiness. Hence a man chooses to be embarrassed with expenses above his pecuniary condition, for the vain purpose of exciting admiration, rather than to gratify his own tastes, in the enjoyment of greater freedom and a more humble and frugal mode of life.

In vain does the worshipper of fashion, by planting an ornate dwelling-house in the heart of a forest, endeavor to add to it the charm of a rustic cottage in the woods. The traveller, as he beholds its proud ornaments glittering through the trees, sees nothing of that charming repose, which, like a halo of beauty, surrounds the cottage of the rustic. He perceives in it the expression of a striving after something that is incompatible with its affectations. There may be a true love of nature among the inmates of this house, who would gladly divorce themselves from the frivolities of high life. But they cannot consent wholly to relinquish that bondage of fashion, which overpowers their love of freedom and simplicity, as the appetite of the inebriate causes him, in spite of his better resolutions, to turn back to the cup that is destroying him. Nature may harmonize with elegance, refinement and grandeur; but not with pretence. The rural Deities will not make their haunts near the abode of vanity; and the Naiad, when she sees her rustic fountain destroyed, turns sorrowfully away from the spouting foam of a *jet d'eau.*

There may be more true love of nature in the inmates of this ambitious dwelling, than in those of the rustic cottage; but the former gives no evidence of this love, if it is built in a style that expresses that folly which is continually drawing them away from nature and happiness. Place them both in a picture, and the fashionable house excites only the idea of coxcombry, while the rustic cottage charms all hearts. Is it not possible to borrow this indescribable charm, and add it to our country residences? Not until the builder or designer has become as one of these rustics in the simplicity of his heart, and is content to forget the world when he is planning for his retirement. Then might the traveller pause to contemplate with delight a house in which the absence of all affectation renders doubly charming those rural accompaniments, in which the wealth of the owner, if he be wealthy, is detected only by the simple magnificence of his grounds, and his taste displayed by the charm which art has added to nature, without degrading her Fauns and her Hamadryads into mere deities of the boudoir.

These old houses with a long back roof are not the only picturesque houses among our ancient buildings: but no other style seems to me so truly American. Wherever we journey in New England, we find neat little cottages of one story, some with a door in front dividing the house into two equal parts, some with a door at the side of the front, and a vestibule with a door at the opposite end. It is common, when you meet with one of these old cottages, in the less frequented streets in the country, to see an elm standing in front, shading a wide extent of lawn. Sometimes there may be merely an apple tree or pear tree for purposes of shade. A rose-bush under one of the windows, bearing flowers of a deep crimson, and a lilac at the corner of the garden near the house, are perhaps the only shrubbery. These humble dwellings are the principal attraction in many of our old winding roads, and they are remembered in connection with many delightful rural excursions. The rage that has possessed the sons of the original occupants of these cottages for putting up paste-board imitations of something existing partly in romance and partly in the imagination of the designer, has destroyed the rurality of many of these scenes in our old country villages.

Any marks of pretension, or of striving after something beyond the supposed circumstances of the occupants of a house, are disagreeable to the spectator. Could the sons of the old-fashioned people who occupied these plain dwellings have labored to preserve the simplicity and rustic expression of these, combined with a purer style of architecture, the effect would have been exceedingly pleasing. They have done just the opposite of this. They seem to have been ambitious to exclude from their houses everything that would be remotely suggestive of the simple habits of rural life, and have endeavored to make them look as much as possible, with one hundredth part of the cost, like the villa of a nobleman. So many of these ambitious cottages have been reared in many of our old streets, as to have entirely destroyed that picturesque beauty that made almost every route a pleasant landscape. The street once covered on all sides with those rural scenes that charm every lover of the country, has become as tame as one of those new-made streets, laid out by speculators, to be sold in lots under the hammer of the auctioneer.

The New England people have been repeatedly characterized as wanting in taste: and this deficiency is supposed to be exemplified in the entire absence of ornamental work about our old houses and their enclosures. It is a maxim that a person who is deficient in taste always runs to an extreme in the use of ornaments, whenever he attempts to use them. Hence the profusely decorated houses of the present generation do not evince any positive improvement in taste, when compared with those of their predecessors. They are simply a proof that the people of the present time have more ambition: but that want of taste, which a former generation exhibited in their entire disregard of ornament, is manifested in their successors, by their profuse and indiscriminate use of it. That great progress has been made throughout the land, will not be denied: but the present state of public taste is evidently a transition state from an age of comparative rudeness to one of perfected improvement.

The object of these remarks is not to deride wealth, but to condemn the ostentation of wealth that does not exist, instead of guiding oneself by a careful study of the rules of taste. A man of great pecuniary resources would reject these meretricious decorations as the mere sham substitute for something better which he would adopt, because he could afford it. The false taste which is censured is mere architectural hypocrisy. My object is to analyze certain of our emotions and sentiments, and to prove thereby that the man who builds a *showy* house, not only offends against good taste, but also essentially mars his own happiness. Why do we contemplate with the purest delight a simple cottage in a half rude, half cultivated field, except that it gives indications of something adapted to confer happiness upon its inmates? The rustic well, with a long pole fastened to a lever, by which the bucket is raised; the neat stone wall or iron-gray fence that marks the boundary of the yard; the old standard apple-trees dotted about irregularly, all over the grounds; the never-failing brook following its native circuitous course through the meadow; all these objects present to the eye a scene that is strongly suggestive of domestic comfort and happiness.

Let us not, in our zeal for rearing something beautiful, overlook the effect of these venerable relics of the more simple mode of life that prevailed fifty years since. Let us not mistake mere glitter for beauty, nor the promptings of vanity for those of taste. Let us beware, lest in our passion for improvement, without a rational aim, we banish simplicity from the old farm, and allow fashion to usurp the throne of nature in her own groves. Far distant be the time when the less familiar birds of our forest are compelled to retire beyond the confines of our villages, and when the red-thrush is heard only in a few solitary places, mourning over that barbarous art which has destroyed every green thicket of native shrubbery, where alone she makes her haunts. This rage for foreign shrubbery is fatal to the birds, each species of which is dependant on certain native trees and shrubs, for subsistence and protection. By eradicating every native coppice, and planting exotics in their place, we may as effectually banish the thrushes, and many whole species of sylvan warblers from our territories, as by constantly shooting them.

Another style of old houses is the square house with a hipped roof, usually of two stories. These are a little more pretending than the others I have described, and are more frequently seen with an ornamental fence in front, after the present fashion. Hence they produce less of a picturesque effect than some of the more primitive houses. A more picturesque house is a nearly square building of one story, with a curb roof, having the front door at the extreme end of the front, and a vestibule on one side, formed by extending the back half of the house a few feet, with only half a roof, making the door in the vestibule and the front door face the same way. Modern improvers say there is no beauty in these old houses. As well might they say there is no beauty in an old tree, unless it is nicely trimmed and whitewashed.

More charming to the sight is a humble two-story house, unadorned by a single artistical decoration, with a venerable old tree in front and a wide extent of lawn, than the most showy house in the modern filagree style, with its narrow enclosures, its stiff spruces, and its ornamental fence that seems purposely designed to shut out nature.

One principal charm of a cottage consists in the rural appurtenances around it; and the less inexpressive architectural ornament there is about it the greater is this charm. It is true there is a style of building which is always pleasing to the eye, and another which is either offensive or unattractive. A good style differs from a bad style chiefly in suggesting, by its external appearance, all those exterior and interior arrangements which serve to make it a happy and comfortable residence. This is the principal beauty which is desirable in a dwelling in order to produce the most charming effect. There are certain ornaments the utility of which is not apparent: but everything added externally to a house, in accordance with the rule of proportions, that suggests to the mind an additional comfort or convenience, renders it more pleasing to the sight. Hence a plain square house, without a single projection, is not so pleasant to look upon as another house, whose wings and vestibules, under separate roofs, exhibit at once to the mind, the conveniences within. A neatness and elegance of finish would improve it still further: but any inexpressive ornaments would spoil it. There is a class of ornaments, however, which are beautiful from suggesting something, independent of actual utility, that is agreeable to the imagination.

I would venture to affirm that the more showy the house, other things being equal, the less pleasure does it confer upon its owner or occupant. A perpetual glitter soon tires upon the eye and wearies the mind. There is a want of what painters call repose in a house that is excessively ornate: and the occupants of such a house must feel less tranquil satisfaction in it than in one of equal convenience, which is furnished only with such ornaments as have been denominated *chaste.* Chaste pleasures are those which are attended by no disgust and bring no repentance; and chaste ornaments resemble them in this respect, by giving permanent satisfaction, and by causing no fatigue to the eye or repentance to the mind. There is a stronger analogy between these two things than any one who has not reflected upon the subject can be aware of. It is safe to assert that any particular style of building and grounds, which serves in the highest degree to promote the happiness of the permanent occupants, will confer the most enduring pleasure upon the beholder.

We frequently admire without one spark of affection, and love with deep affection what we do not admire. But more pleasure springs from love than from admiration; and when people madly relinquish those humble scenes and objects which they love, to obtain those which shall glitter in the public eye, tickle their own vanity and excite the envy of their neighbors, they commit a greater error than the most bitter declaimer against pride has generally imagined. I am far from believing the paradox maintained by Rousseau that man is more happy in a state of nature than in a civilized state. This author, in his efforts to grasp at an important truth, reached beyond it. That great truth I believe to be this:—that the more we extend and cultivate the moral and intellectual advantages and refinements of civilization, while we tie ourselves down to the simple habits of rustic life, the greater will be the sum of our happiness.

Beverly, February, 1854.

ART. III. *Descriptions and Observations, of a General Character, relating to some Varieties of Fruits, with Statements concerning the Seasons of* 1853. By the Hon. J. S. CABOT, President of the Massachusetts Horticultural Society.

THE following remarks, concerning some varieties of different species of fruit, accompanied with observations of a general character in relation to the subject of Pomology, and prefaced by a statement in regard to the weather for the several seasons of 1853, have been prepared for the Magazine of Horticulture, with the hope that they may be of interest to its readers. With respect to fruits, the observations will not be confined to those varieties that are new, or of recent origin or introduction, but will embrace some already well known, or that have been long in cultivation, when it is supposed that anything of interest can be said concerning them. While, perhaps, in some instances a desire for novelty, with the hope of acquiring therewith something of surpassing excellence, may have led to the unjust neglect of some varieties of real merit, in others a high sounding name, or a reputation too hastily accorded, has induced an over-appreciation of such value as might really be possessed, if anything can be said to correct erroneous impressions and lead to the formation of a true judgment with respect to either of these particulars, such does not seem out of place in a communication of the character of the present.

For reasons that are obvious, some account of the season seems an appropriate introduction to a statement in reference to some of that season's horticultural products, as one can hardly fail to be more or less affected by the other. In estimating the influence exercised by the season, upon crops of any kind, the state of the closing months of a previous year cannot be disregarded, intimately blended as such are with the opening months of the succeeding one; and therefore an account of the season at the close of 1852 is as important as at the opening of 1853.

The two last months of 1852 were fine, mild, and comparatively dry, permitting out-door operations to be carried on for the most part of the time, as well as at any period of the year. The mildness of the fall of 1852 was favorable to fruit trees, affording an opportunity for the new wood to become perfectly ripened, and the fruit buds matured so as to properly discharge their appropriate functions. January, 1853, was unusually mild, and for much of the month the weather was fine. For the first twelve days the ground was bare, but from that time until its close, partially, or wholly covered with snow. During the month the quantity of rain, and snow reduced to rain, in the proportion of 10 to 1, that fell, was 1½ inches; and the mean of the thermometer for the month, from observations taken daily, at 9, A. M., 12, M., and 4, P. M., was 32°, the lowest point reached having been 4°, on the 27th, early in the morning, before sunrise.

The weather of February was very mild from the 1st until the 8th; it was so mild that the ground remained unfrozen, and on no day subsequent thereto did the mercury fall below 5°. For the greatest part of the month the ground was bare of snow. The quantity of rain that fell, including snow reduced to rain, was 2¾ inches, and the mean of the thermometer, taken at the same hours as in January, was 34°.

Through March the weather, generally, was clear and fine, without being very warm; the quantity of rain that fell, three-quarters of an inch, and the mean of the thermometer, 42°, it being understood that in this, as well as in all subsequent months, the mean of the thermometer was that of observations taken daily, at 9, A. M., 12, M., and 4, P. M. By the close of the month the frost was out of the ground, and the spring seemed opening finely.

April was a pleasant month, and rather dry; the quantity of rain that fell was 1¼ inches, and the mean of the thermometer, 51°. The weather was more than commonly uniform in temperature, the highest point reached by the thermometer having been 73°, and that only for one day, the 29th.

May was warm and pleasant, exempt to a great degree, as was the preceding month, from the raw, cold east winds, usual at this season of the year. There was a frost but once in the month, and then quite slight, on the 14th, while there was some very warm days, the thermometer on the 17th rising to 85°. Cherries began to blow on the 7th, plums were in blow on the 10th, peaches on the 11th, and the Jargonelle pear on the 15th. The mean of the thermometer was 63°, and the quantity of rain that fell, 6¾ inches, of which quantity 3¼ inches fell on the 25th and 26th.

June was very dry; from the 14th to the 24th the weather was hot, the mercury rising on the 21st to 95°, and on two other days to 90°, but, with this exception, the month was rather cool, with an appearance, early on the morning of the 2d, of a slight frost. The quantity of rain that fell was but one-quarter of an inch, and the mean of the thermometer, 74°.

July was cool and dry. The quantity of rain that fell was 2½ inches, and the mean of the thermometer, 75½°, the highest point being 89°. On the 20th, 1¼ inches of rain fell, the first that had been sufficient to produce much effect since May 27th.

August was very wet; but, with the exception of a few days in the middle of the month, not distinguished for extreme heat, the mean of the thermometer for the month being the same as for July, 75½°, with the mercury, when at the highest, 93°. The quantity of rain that fell was unusually great, having amounted to 8¾ inches. The effect of the heavy rains, succeeding the long drought of June and July, was to cause a renewal of the vegetation checked by the latter, to make, in many instances, fruit trees blossom a second time, and the fields and meadows to be as green as usually in June. The dew-point this month was at 74, a point higher than has before been observed.

The first few days of September were very warm, the rest of the month generally fine. On the morning of the 30th there was a slight frost, not sufficient to injure tender plants. The quantity of rain that fell was 3½ inches, and the mean of the thermometer, 68°.

The weather of October, until the 23d, was fine; the rest of the month was, with some fine days, wet. On the 30th was a heavy frost, the first of the season, sufficient to kill tender plants in the gardens. The quantity of rain that fell was 2½ inches, and the mean of the thermometer, 57½°.

November was mild, but wet and disagreeable, and the ground thoroughly saturated with water. The quantity of rain falling having been 4¾ inches, and the mean of the thermometer, 46°.

December, too, was mild, but wet, with a few cold days, the quantity of rain and snow, of which far the greater part was snow, was equal to $4\frac{1}{5}$ inches of rain. The mean of the thermometer was $34\frac{1}{2}$°, the lowest point having been 4° early on the morning of the 30th, and as low as the lowest point to which the mercury has fallen for a year. The mildness of December, 1853, has been a frequent subject of remark; yet it is found, on examination, that December, 1852, was warmer, taking the mean for the month, by $3\frac{1}{2}$°, and those to whom that mildness appeared unnatural seem to have forgotten that in 1847, from December 8 to December 15, dandelions in sheltered places were in blow, and the buds of the lilacs manifestly swollen. The quantity of rain, with snow reduced to rain, in proportion of 10 to 1, that fell through the year, was $39\frac{45}{100}$ inches.

It has been ascertained, by measurement of the whole quantity of rain and snow reduced to rain, in the proportions before named, carefully made for a series of years, that the quantity of rain that falls in the vicinity of Boston is, on an average, $34\frac{1}{5}$ inches in each year. The whole quantity that fell, from May 31, 1846, to May 31, 1851, having been 171 inches. The quantity that fell in the year 1853 appears to have been $39\frac{45}{100}$ inches, or $5\frac{25}{100}$ inches above the average quantity. Yet, was this so unequally distributed, that a long, protracted and very severe drought was experienced at a period of the year most trying to vegetation. With the exception of a few slight showers, too trifling to exercise much influence, no rain fell from the 27th of May until the 20th of July, a period of nearly eight weeks, during which there were many days of extreme heat. A drought so severe could not fail to be attended with great injury, and had it not been for the copious rains in the last of May, by which the earth was completely saturated, with probably fatal consequences to many crops of both fruit and vegetables. As it was, both were seriously injured, in quantity and quality. In many instances the leaves of trees drooped, and those varieties of fruit that ripen at that season did not attain their usual size or flavor. The peculiar and distinguishing feature of the year 1853, then, appears to be an extreme drought, with, taking the whole year, unusually copious rains. The prevailing character of the weather and of the winds, in the vicinity of Boston, may be with some an object of interesting inquiry, and for the purpose of gratifying such, and also to place the same on record for future reference, should such be at any time desirable, in a permanent form, the following statement in reference thereto may not appear inappropriate or useless.

It was ascertained by a series of observations, carefully made and registered by Henry Ropes, Esq., of Salem, from January 1, 1841, to January 1, 1851, that during that period of 10 years there were 1751 clear, 533 rainy, 564 cloudy days, and 802 that were in part clear and in part cloudy, and that during that same period there were 965 whole days, and 1531 parts of days, during which the wind was from the western quarter; 368 whole and 1482 parts of days, when it was from the eastern quarter; 139 whole and 368 parts of days, when it was south; and 30 whole and 154 parts of days, when it was due north. From this statement it appears that for very much the largest portion of the year the weather is clear, or clear and cloudy, and that less than one-sixth of the days in the year are rainy; that the winds from the western quarter predominate; that it is seldom from due north, but somewhat more frequently from the south; while here, on the seaboard, especially, for parts of days, the easterly winds prevail to a considerable degree. These facts may be worth attending to in setting out trees, or in providing shelter from what is believed is often the cause of injurious effects, the high winds that prevail in this latitude.

Fruit trees appeared to have passed through the winter of 1852–53, uninjured, and the crop, taking all the species into consideration, was fully an average one. Apples were, it is true, an almost entire failure, but pears, notwithstanding the abundant product of 1852, were in quantity above the average. The crop of peaches was larger than it had been for many years; that of cherries, of which early in the season the blossom gave great promise, was injured by the dry weather of June, but was still sufficient; plums were deficient in quantity and poor in quality, as were strawberries, the latter having suffered from the drought in June, as the former did from the great rains of August.

Of all the branches of that which, with many, it is the fashion to call terraculture, the cultivation of fruit is perhaps the most interesting. Its successful practice calls for the exercise of much skill, and the possession of some scientific attainments. The varieties of all the species, and indeed of some single species, being extremely numerous, extending through the whole season, thereby afford occupation and objects of interest for a large part of the year. Of the various branches of pomology, meaning to include in that term all that relates to fruit, the raising of new varieties from seed is perhaps the most exciting. Burdened, as the catalogues of the nurserymen are, with the names of hundreds of varieties of pears and apples, and with very many of those of other varieties of fruits, the question may be asked, Why seek to increase the number of such varieties? To this the answer which readily presents itself, is, that we should not, in this or in anything else, remain satisfied with present attainments, but should constantly strive to obtain something better than that which we already possess. Besides, this great amount of variety is found, by experience, to be apparent rather than real: that is, on trial very many, by far the largest proportion of the new kinds introduced, are found, for some reason or other, unworthy of general or an extended cultivation. Some cultivators have expressed the opinion, though it is not intended here to assent to the correctness of that opinion, that out of all the perhaps one thousand kind of pears borne on the nurserymen's lists, not more than twenty-five are worthy of preservation and propagation. Some fruit growers too entertain the belief, though it too is one that may not stand the test of facts and examination, that varieties of native origin, the qualities of the fruit being equal, are, on some accounts, superior to those of foreign production. This, if so, furnishes a sufficient inducement to the attempt of raising new varieties from seed. But whether this is so or not, a hope and expectation of effecting, in some respects, an improvement, has appeared to many sufficiently reasonable to lead to the practice on a limited scale, and generally upon no well considered and adopted method, of that which is pursued most extensively in Belgium and France, the raising of new varieties of fruit from seed.

In the raising of new varieties of fruit in Europe, only two methods that could be called systematic—though a third may have been practised, without its having been taught on any assumed or acknowledged principle—have been pursued: one inculcated by Dr. Van Mons in Belgium, and thence taking his name; the other, that known as Mr. Knight's, being that practised in England by Mr. Knight, late President of the London Horticultural Society.

Dr. Van Mons's theory seems to be founded on the idea that varieties of fruit long in cultivation show a disposition to depreciate, and that seedlings from the old varieties, instead of giving any promise or hope of any improvement, tend, in the qualities of their fruit, to the original type of the species, and from this is deduced, as the true method of proceeding, when improved and superior varieties are sought to be produced from seed, to sow those of the original wildings of the species, and that by the cultivation and production by seed, from those of new varieties through successive generations, the amelioration of the species will be effected, and numerous new varieties of superior excellence be obtained. Dr. Van Mons says, "the results of attempts to vary is to ameliorate. A fruit ceases to change only when it can be no farther ameliorated, and becomes fixed at its ultimate point of perfection. I have arrived at a point, as I had foreseen, where, instead of as at first, gaining only one good fruit among an infinity of bad, I have only one, or rather no bad among an infinity of good or tolerable. I call that the last stage when the pear produces none but good fruit." Again, he says, "We should not seek variation by hybridization, as, thereby, instead of perfection we cause degeneracy; the production of mongrels are only curious." And again, "Those who have followed my method and have sown seeds of my new varieties, have already obtained some excellent new fruits. The time is near at hand when no fruit will be cultivated excepting those producing themselves by seed."

Mr. Knight pursued a very different method, that of cross-impregnation, being that apparently condemned by Van Mons under the name of hybridization. Selecting some variety, he fertilized its flowers with the pollen of some other variety, so that the crossing or mingling of the two distinct varieties might result in the offspring in a decided improvement. It is unnecessary to express an opinion upon the comparative merits of the two methods: if success be the criterion of merit, that of Mr. Knight seems to have the advantage; for if Van Mons has produced a far greater number of new fruits, he also raised an infinitely greater number of seedlings; and of the whole number raised by each a very much greater proportion of those raised by Mr. Knight were good, or a decided improvement, than of those raised by Van Mons. Besides, it is to be remembered, that of some species of fruit, as the pear, to which the attention of both these gentlemen was principally directed, the varieties within reach of Mr. Knight to be submitted to his process of improvement, were comparatively few, and of indifferent quality, and in estimating the results of his efforts the point from which he started is to be kept in view. In other species of fruits than pears, as in cherries, for instance, the success of Mr. Knight was more marked; some of the finest cherries now in cultivation being the results of his attempts to improve that fruit by the system of hybridization, or cross-impregnation, a system adopted in our own country by Professor Kirtland of Ohio, in respect to the same species of fruit, with such eminent success.

Besides these two systems there is a third, if system it may be called, being the one generally practised in raising new varieties of fruit, and that consists in sowing the seeds of different varieties, promiscuously, or, if any selection is made, simply in selecting the seeds of the best varieties. This is the course, i. e., sowing the seed of the best varieties, presumed to have been followed in Belgium and France, by those to whom we are indebted for very many of the best varieties of new pears, and is that which has to a limited extent been successfully practised in the United States. It may be said, perhaps, that the success of later Belgian cultivators in raising fine new seedling fruits, is a consequence of their taking advantage of the former labors of Dr. Van Mons, in sowing seeds of his new varieties, and goes to confirm the truth of his theory. How this may be cannot here be shown, for seldom any record is made of the parentage of any fruit, and there is no mode of tracing its genealogy except from resemblance. But if true of new European varieties it is not applicable to some of the finest of American origin, as the Seckel, the Dix, the Andrews, and others, where the age of the variety forbids the supposition of their descent from varieties owing their origin to Dr. Van Mons.

The offspring of trees or plants, uncultivated, or growing wild in a state of nature, are, with perhaps rare exceptions, like the parents, while that of those that have been for a length of time cultivated, and have thereby undergone some change in their organization or constitution, show a disposition to sport, as it is called, into varieties. But even here it is believed that the law "that like produces like," holds good to some extent, at least so far that a new variety of superior excellence is more likely to spring from the seed of a good than of a bad existing variety: and in many processes of cultivation this is a law or principle of very general application. The farmer saves his best ears of corn for seed; if an earlier variety is wanted, those that are first ripe. In the case of some vegetables and fruits, particularly, perhaps, in that of those that show the most disposition to break into varieties, as squashes, melons, &c., from the seed of some specimen ripening before the other, a permanently earlier variety has been obtained. The florist who wished to raise a new fine Dahlia, would hardly think of taking the seed from the single purple flower, the type of the genus, with the view of only attaining his object by the raising of successive generations, but would gather his seeds from the most double flowers. It sometimes happens that the descent of a new variety of fruit is clearly evidenced by the resemblance of the offspring to the parent. The Adams pear bears a strong likeness to its parent, the Bartlett, and seedlings from the Seckel have been produced that could hardly be distinguished from the original variety.

Although Dr. Van Mons unqualifiedly condemns "hybridization," yet he most probably was indebted to it for many of his productions, a cross-impregnation being often effected by the intermingling of or near proximity of trees of different sorts, by means of insects, the wind, and like causes.

If called upon to advise what was thought the best method, one the most likely to be attended with satisfactory results, in view of all the circumstances of the case in raising new seedling fruits, the course recommended would be to sow seeds of the best varieties, and the best specimens of the varieties, selecting sorts that were healthy, and that show no disposition to disease, as being the one most likely to result in obtaining valuable new varieties.

Apples and pears being, on many accounts, the most valuable fruits we possess, their improvement has mainly occupied the attention of both amateurs and professional growers, though that of some other species, as cherries, have not been neglected.

More recently the amelioration of some of the smaller fruits is exciting an interest, and seedlings of several are being raised to a considerable extent. Among others the raspberry has received the attention of Dr. Brincklé of Philadelphia, one of the most scientific and enthusiastic pomologists in the United States, and one to whom the country is under obligation for having made known several fine new pears and apples, originating from seed in Pennsylvania and Delaware. This class of fruits, the raspberry, blackberry, &c., is believed to be susceptible of material improvement, and wants, with respect to them, yet exist, that remain to be supplied: a white raspberry, as large as the Fastolf, and of as good flavor as the White Antwerp, remains a desideratum, and its acquisition is a triumph, yet to be achieved. No successful attempts, so far as is known, have been made to improve the blackberry, and the variety distinguished here as the Improved High Blackberry, probably a seedling from the common bramble, owing its origin to accident, is yet the best, and though for size and flavor it leaves but little to be expected, is still, in some particulars, susceptible of improvement. There is another fruit, the Black Raspberry, commonly called the Thimbleberry, that is believed to be well worthy the notice of fruit growers; it is agreeable to most palates, perfectly hardy, productive, and of the easiest cultivation. The manifest effect produced by the cultivation of the common wild kind induces the expectation that it is capable of material amelioration.

A desire has for a long time existed for the production of a hardy grape, ripening at a sufficiently early period of the year to insure its maturity previous to the autumnal frosts, free from the foxy taste and odor, and hard pulpy consistence of even the Isabella and other native grapes, and, above all, not liable to mildew. The Diana has evidenced very considerable progress in this direction, so far at least as earliness and the quality of the fruit is concerned; but the berries and bunches are rather small, and in some respects it does not quite meet the general wish. The attention of many persons has recently been directed to the improvement of hardy grapes, and thus far with encouraging success. Among others, Mr. A. W. Stetson of Braintree has obtained a grape resembling the Isabella, but much earlier, and, it is thought, superior to that variety. Mr. Bull of Concord another, that has been highly commended. Mr. Blood of Newburyport has also two varieties, one somewhat resembling, in color at least, the Catawba, and the other the Isabella, that are both of good promise. Mr. Raabe of Pennsylvania three varieties, that have been described and commended by a Committee of the Pennsylvania Horticultural Society, and no doubt others. This subject seems to have engrossed much of the attention of Mr. Stetson, while it has also been a favorite pursuit with Mr. J. F. Allen, directed, it is believed, towards a somewhat different object. Mr. Stetson has exhibited the past season several new seedlings, one somewhat resembling the Grizzly Frontignan in appearance, that is considered of great promise, and that, he believes, will prove hardy, though its power of endurance and ability to resist mildew, has not been thoroughly tested. He has now great numbers of seedling plants that have not yet fruited. The good fortune that has so far been met with leads to the confident expectation that the attempts to improve the grape will finally be attended with eminent success, and the prophecy may perhaps now be risked, that within a few years hardy grapes, equal in quality to some now grown in grapehouses, will be objects of easy and general cultivation.

In pears, too, the success that has attended the endeavors to originate new varieties from seed, has been encouraging. We have already many that are valuable, and every year brings to our knowledge new ones of much merit. In this connection, it seems but proper to name Mr. Francis Dana of Roxbury, who has been distinguished for his good fortune in raising several fine new varieties of pears from seed, and whose example seems to confirm the views with respect to the raising of seedlings from the best varieties given in the former part of this communication, he having raised his seedlings from seeds saved from the best sorts,—views strengthened in his own mind at least, by the personal experience in the same pursuit of the writer of this communication.

In describing new varieties of fruits, especially of pears, they being so numerous, of foreign origin, great embarrassment is experienced in not knowing, in all cases, whether the kind described is the true sort named. When the same variety has been received from different sources, under the same name, particularly if it answers in some respects to what has been said of the variety, the inference, generally just, is that it is true: but, where different kinds, as is not uncommon, are received from different dealers, under the same name, it is not always easy to decide which, if either, is correct.

Sometimes the only means at hand to identify a foreign variety, is the very general description given of it in the Catalogue of a European nurseryman, and these descriptions are often vague, uncertain, and sometimes incorrect, affording but little reliable assistance in the identification of varieties. No doubt honesty is practised, and correctness aimed at by the principal European dealers in trees, but, unfortunately, the consequences of the dishonesty or carelessness of a single individual, may extend through the whole trade, when some variety has been erroneously disseminated by such individual. It has been said that certain kinds of pears, of great reputation in Europe, have never been permitted, to use a technical phrase, "to go out." And that there are individuals who could not resist the temptation, in view of the profit to be derived from the sale of such, to sell and disseminate, under the name of such new varieties, old and even worthless sorts. And that thus, where trees of some one particular variety have been disseminated under the name of such new kind, it has given rise to the opinion that the new name was merely a synonym of the old, when in reality it was a distinct kind. All these complications, in addition to the mistakes that will sometimes be inevitable in the best conducted establishments, increase the perplexity and embarrassment frequently experienced with respect to new fruits of foreign origin. When descriptions are given, as is now proposed, of some new sorts, they are liable to be erroneous from the causes alluded to, and any opinion expressed with respect to the quality of any new fruit, as such frequently materially alter in years subsequent to those in which they are first produced, such opinion, it should be understood, is liable to be modified, perhaps entirely changed, by a longer experience. The past season affording an opportunity for examining and testing various new fruits of the different species, brief descriptions of some of these, accompanied with remarks concerning a few of the older kinds, seems a not inappropriate conclusion of this communication.

STRAWBERRIES.

Jenny Lind Strawberry is a seedling raised by Mr. Isaac Fay of Cambridge; it was exhibited, and brief mention made of it in 1852; the past season afforded an opportunity of its further trial. Although the plants grew under the shade of trees, the berries were ripe on the 11th of June, thus establishing the fact that it is a very early variety. It is believed too that it will prove very prolific, for on trusses exhibited every flower had set, and produced perfect fruit. It is of the family of the scarlets, a staminate with handsome fruit, of fine flavor, appearing to be an improvement on the Early Virginia.

Walker's Seedling, having been disseminated in 1852, has fruited the past year in several collections, and seems to sustain the favorable opinion heretofore expressed of it. With respect to the cultivation of the strawberry, what seems now to be established as the true theory, requires the main dependence for a crop to be placed upon the pistillate varieties, with a sufficiency of the staminate sorts to insure a perfect fertilization. For this purpose the Jenny Lind and Walker's Seedling, both staminates, it is believed, may be safely recommended, besides, that they appear to be great bearers, and worthy, on account of their intrinsic merits, of an extended cultivation.

Several new or recently introduced varieties, imported by Hon. M. P. Wilder, fruited the past season. Of some of these, specimens were exhibited, and thereby an opportunity was afforded of partially testing the following varieties:—

Duchesse de Trevise, very like Swainston's Seedling.

Hericarte de Thury, a scarlet berry, of good flavor, a staminate, said to be a good bearer.

Marechal de la Cour, a very fine high flavored strawberry, a staminate variety, and good bearer.

Barnes's new Large White, a white berry with red seeds, rather large, late, with a little of the flavor of the Wood strawberry, also a good bearer.

CHERRIES.

Some new cherries were exhibited the past season, but as the memoranda made at the time respecting them have been accidentally mislaid, no description can be given of them, unless it be of the Duchesse de Pallua. This was an early cherry, of a dark color and very fine flavor, reported to be hardy, and a great bearer. Pierce's Late Red is a very fine native cherry, if not new, still of recent origin; it is a late fruit of fine flavor, and one, as is believed, worthy of a very extended cultivation.

GRAPES.

The improvement of the grape, with a view of obtaining varieties adapted to our climate, has been of late, as has already been stated, sedulously pursued by the raising of seedlings, and new varieties have been, and will probably continue to be, annually exhibited. In endeavors for this object Mr. A. W. Stetson has distinguished himself, and during the past season he exhibited several new seedling varieties, among others the following:—

Seedling No. 1, from the Grizzly Frontignan, of a purple color; both bunches and berries of good size and fine flavor. This grape was highly approved of by good judges, and will, Mr. Stetson thinks, prove to be hardy. [Called the Cabot.—Ed.]

Seedling No. 2 is from the Grizzly Frontignan; has berries nearly white, with a little tinge of blush.

Seedling No. 3, also from Grizzly Frontignan; resembles No. 2, but has larger berries.

Seedling No. 4 is from the Black Hamburg; three years only from the seed.

Seedling No. 5, a seedling from the Sweetwater; exactly like the common Sweetwater, in everything but color, which was a dark blue.

In addition to the foregoing, Mr. Stetson fruited the past year many other seedling grapes. Mr. James Blood of Newburyport has two seedling grapes, which he states have been in bearing eight years, and never failed to produce a crop. The fruit was ripe this year in the last week of August. One of these was a large purple grape, resembling the Isabella; the other, in color, more approximating to the Catawba. They seemed to be both good grapes, and from the circumstance of ripening so early in the season, in addition to their other qualities, may prove an acquisition.

PEARS.

There have been several new pears the past season; among others, *Gustave Burgoyne*, of a round, or bergamot shape; medium size, with a smooth yellowish green skin, russet specks, and russet at calyx, little red in the sun; calyx open; flesh, white, tender, pleasant, but rather wanting in flavor; rots at the core. Season, October.

Laure de Glymes.—Rather small, of a roundish obovate form and short thick stem, with a very delicate smooth skin, of a yellow color, nearly covered with a golden russet, a few specks of darker russet; calyx very large, open; flesh, white, fine grain, tender, but solid or clammy, rather dry, lacks juice; flavor, pleasant subacid. October.

Beurré Nantais.—Medium size, pyriform shape, stem short; flesh runs up on the stem without any depression; with a smooth, greenish yellow skin and russet specks, also russet at stem; calyx very open; flesh, white, juicy, tender, of a pleasant but not high flavor; rots at the core. October.

Belle de Esquermes.—Received from M. V. Houtte; rather small, obovate; stem short, not set in any depression; skin, green, russet specks, much russet at calyx, and some at stem, also some blotches of russet; calyx open; flesh, white, rather coarse, breaking, but tender, and though pleasant, of not much flavor. October. This is an entirely distinct pear from the one received under the same name from M. Jamin.

Beurré Benoits.—Of a medium size, with a round or bergamot form, of a dull yellowish green russet color, with blotches and specks of a darker russet; stem short, in a very slight depression; calyx open; flesh, white, rather coarse, and little gritty at core, melting, juicy, of a pleasant slightly subacid flavor. This variety seems worthy of cultivation. October.

Beurré Superfin—is a pear of medium size, obovate form, with a skin of a yellow ground, nearly covered with russet; short stem, with no depression in the fruit; calyx open; flesh, yellowish white, very juicy, melting, of a rich subacid flavor. October. One of the best pears of its season.

Bergamot Fievé—proved the St. Michael Archange, whether through mistake, or that it is a synonym is not known.

Beurré Judes.—Longue de Monkowty, for the same pear was received under both these names, and no means are possessed of deciding which is correct. In size above a medium, with a long stem of a pyriform shape; skin thick, of a greenish yellow color, thickly covered with russet specks, russet at the stem and calyx; calyx large, open; flesh, yellowish white, tender, juicy, sweet, with a peculiar flavor, at times somewhat like bitterness. To some this may be a pleasant fruit, but it is not believed that it will ever be held generally in high estimation.

Calebasse Delvigne.—Small, obovate, running up pointed at the stem; stem short, of a yellow color, red in the sun, few brown specks; calyx very large, and very open; flesh, yellowish white, juicy, tender, of a pleasant flavor, but lacked richness and sweetness. Last of October.

Poire Rigoleau.—Small, nearly round, with long slender stem, with a thick greenish yellow skin, covered with russet specks, little russet at both stem and calyx; calyx open; flesh, white, juicy, tender, little grit at core, of a very pleasant flavor. First part of November.

Poire Neil.—Large, pyriform shape; stem rather long, set on one side; yellowish green skin, large brown specks, some blotches of russet; calyx large, open; flesh, white, juicy, melting, sweet and pleasant. This same pear has been received under the name of Merveille de Charneuse.

Mr. Francis Dana of Roxbury has raised several seedling pears of great promise, of some of which descriptions have already been published; among others,

Dana's Seedling, No. 1, or Marthy Ann, a very good pear, large, or above a medium, of a rather lengthened, obovate form, with a smooth, thin yellow skin, with russet specks; calyx closed; flesh is white, juicy, tender, of a very pleasant slightly subacid flavor.

Dana's Seedling No. 16, is a fine fruit, under a medium in size, obovate form, short stem in a very slight depression; calyx small, open, in a rather deep cavity, with a smooth, yellow russet skin, with dark russet specks; flesh, yellowish white, juicy, tender, sweet, high flavored.

Dana's Seedling No. 19, is a large pear, obovate form, swelling out at the base; stem of a moderate length, in a rather slight depression; skin yellow, thick; flesh, white, tender, juicy, half melting, of a pleasant perfumed flavor. This pear, in both shape and flavor, resembles the Diel, from which variety it probably originated.

All three of these seedlings of Mr. Dana are considered worthy of general cultivation, and of being recommended as valuable acquisitions. The season of all of them is November.

Napoleon d'Hiver?—This is probably erroneously named, as other pears received under this name have uniformly proved to be the Napoleon. This is, however, entirely a distinct variety, being a small obovate shaped pear, running up to a point at the stem, with a smooth, thin, russety yellow skin, slightly red in the sun; calyx small, closed; flesh, yellowish white, very melting, juicy, sweet and pleasant. A very good pear, to which perhaps the only objection is its size. November.

Henriette Bouvier.—Of an oblong roundish form, with a long, slender stem, without depression; calyx large, open; thick, yellowish green skin, with specks and blotches of russet; flesh, white, juicy, tender, sweet, but not much flavor. November.

Belle Alliance.—Irregular, turbinate shaped pear, with a long stem; with a thick, coarse, yellowish skin, with brown specks and blotches, bright red in the sun; calyx large, open; flesh, juicy, breaking, of a pleasant flavor, but somewhat astringent. In some European catalogues Belle Alliance is said to be a synonym of Beurré Sterkman. This is an entirely distinct and far inferior variety. December.

Eastnor Castle.—A pear of medium size, of a roundish form; long stem; with a thick, green skin, and small russet specks; calyx open; flesh, greenish white, juicy, tender or melting; almost exactly, in both flavor and consistency, like the Long Green of Europe. December.

Blanc per Ne?—Mr. Rivers says, perhaps Blanc Perle; a large, flattened, obovate or turbinate shaped pear, with a long stem, rather on one side, no depression at stem; calyx partially closed, in a rather deep cavity; skin of a yellowish green, with brown specks, little red in the sun; flesh, white, of a fine, close grain, of a very pleasant subacid flavor; specimens did not ripen well; if with proper treatment it should prove melting, might be desirable. December, January. The Blance per Ne may be, as has been asserted, the same as Leon le Clerc de Laval, a baking pear; this differed from that variety in the form of the fruit and growth of the tree.

Prevost.—Of medium size, obovate form; short stem, not depressed; calyx large, open, in a shallow cavity; smooth, yellow skin, reddish specks, and bright red in the sun; flesh, white, half breaking, of a sweet musky flavor. As specimens grew on a tree recently removed, perhaps they were not a fair criterion of the quality of the variety. January.

Hericart de Thury.—A small, roundish obovate pear, with a short stem set on one side, in a slight depression; calyx open, with a thick, greenish skin and russet specks, slight blush in the sun; flesh, white, rather dry, of a very peculiar flavor, quality indifferent. January.

German Muscat.—Is of medium size, pyriform shaped, with a long stem; calyx small; skin of a yellowish green color, russet specks, and little red in the sun; flesh, yellowish white, juicy, tender, of a very pleasant sweet flavor. December. This is a very old variety, and seems to have gone nearly out of cultivation. Some good reason may have led to this neglect, but, so far as quality is concerned, it is superior to many of recent introduction, with a great reputation.

Cross Pear.—Of medium size, round form; short, thick stem in a slight depression; calyx closed; thin, yellow skin, with russet or red specks, red in the sun. A native pear from Newburyport, not of very recent origin; a very handsome and most excellent fruit, with a yellowish white flesh, tender, juicy, little subacid, but of a rich, spicy flavor. December. The only drawback to this variety is, that the tree is a poor grower; it is one of the very best winter pears in cultivation.

Jean de Witte, or 1482 of Van Mons.—Of medium size, flattened obovate form; short stem, rather on one side, in a slight depression; calyx closed in a very shoal cavity, with a yellowish green skin, with russet specks and stripes, and blotches of russet; flesh, white, juicy, melting, sweet, very rich. December. One of the best pears of the season. The tree, in its growth, somewhat like the Seckel.

Paradise d'Automne.—M. Leroy, in the edition of his Catalogue for 1853, seems to consider this but as a synonym of the Beurré Bosc. It is singular, that a cultivator so extensive and observing as M. Leroy, should have fallen, if fallen he has, into such an error, for the two varieties are entirely distinct, with no resemblance except a general one, of shape and color, the Beurré Bosc being a later, larger, and much finer fruit, every way, than the Paradise d'Automne: besides that, the growth of the trees is very different. The Paradise d'Automne is, it is believed, one of those pears that have been very much overrated. It may be, sometimes, under favorable circumstances, fine, but is more commonly of very indifferent quality. It should, in all cases, be gathered before ripe; if suffered to hang on the tree until it assumes the fine cinnamon russet that this variety takes at maturity, it is worthless. The fruit is handsome. The tree is a fine grower and good bearer; beyond this it has not much, it is believed, to recommend it. [We are not so surprised as our correspondent, that M. Leroy should consider it synonymous with the Beurré Bosc; he has only followed Mr. Downing, who, in his *Fruit Trees of America*, among other errors, says it so "strongly resembles the Beurré Bosc, as to lead him to suspect its identity."(?)—Ed.]

Soldat Laboreur was this year a good pear. The fruit from the same trees had been previously nearly worthless. This affords another proof of the necessity for caution with respect to the adoption of a very decided opinion as to the quality of a fruit, particularly a pear, upon a slight experience.

Salem, February, 1854.

ART. IV. *Descriptions and Engravings of Select Varieties of Pears.* By the EDITOR.

IN our last volume (XIX, p. 449) we described and figured six varieties of American pears; we now add to our list six varieties of foreign origin. Since the commencement of this series of articles on the pear, in our volume for 1845, (X,) we have figured and described ONE HUNDRED AND SIXTY-TWO varieties, embracing every new and valuable kind introduced to cultivation during a period of ten years, many of them of remarkable excellence. We shall continue to add to the list every new pear that shows any promise of becoming a desirable addition to any collection, large or small.

163. TRIUMPH DE JODOIGNE. *Bon Jardinier*, 1848.

Brief descriptions will be found of this pear *(fig.* 3*)* in our volume for 1849, (XV, p. 107,) and in subsequent volumes. The only notice we have found of it is in the *Bon Jardinier*, for 1848, where it is stated to have been raised by the late M. Bouvier, a celebrated amateur pomologist of Jodoigne, Belgium. It first fruited here in 1848, and has since proved to be a very fine pear, of the size of the Beurré Diel, which it somewhat resembles in shape and general appearance. The tree is a most vigorous grower, with a very large beautiful foliage, and quite distinct. It is a great bearer, ripening late in autumn, and succeeds well either on the quince or pear. It will prove a valuable acquisition.

The tree is a strong grower, making very stout annual shoots, somewhat irregular in its habit, with nearly horizontal branches. Wood dark brownish olive.

Size, large, about three and a half inches long, and nearly the same in diameter; *Form*, oblong obovate, little irregular, with a large swollen crown, contracted slightly in the middle and obtuse at the stem; *Skin*, fair, slightly rough, dull greenish yellow, much russeted in spots and splashes, deeply tinged with a bronzy red in the sun, and dotted over with very large russety specks; *Stem*, medium length, about three quarters of an inch long, moderately stout, curved, and obliquely inserted in a small shallow cavity, highest on one side; *Eye*, medium size, open, and but little depressed in a small basin; segments of the calyx, short, stiff; *Flesh*, yellowish white, coarse, melting and juicy; *Flavor*, rich, sugary, sprightly, and agreeably perfumed; *Core*, medium size; *Seeds*, small, long, sharply pointed, and dark. Ripe in November and December.

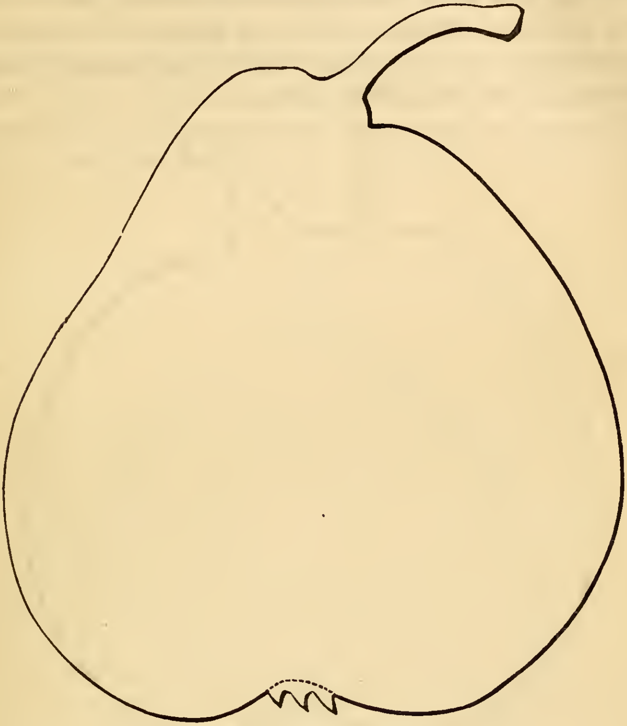


Fig. 3. Triumph de Jodoigne.

164. Beurre′ Benoits. *Revue Horticole*, 1848.

Beurré Auguste Benoits, of some Catalogues.

The Beurré Benoits (*fig.* 4) is of recent addition to American collections, and is yet but little known to our cultivators. It is described and figured in the *Revue Horticole* for 1848, and commended as a variety of great excellence. So far as we have tried it, now four or five years, it fully sustains its foreign reputation. It is of large size, bergamot shape, having much of the rich character of the Gansell's Bergamot, and superior to that fine old variety.

The tree is only a moderate grower, and does not appear to do very well upon the quince,—at least our trees on that stock have not grown as freely as some other varieties; it may be, however, from some fault of the locality, soil, or cultivation. Wood reddish brown.

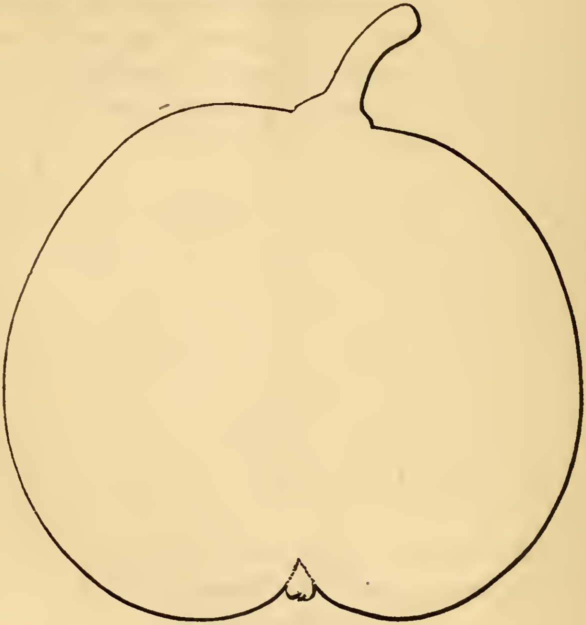


Fig. 4. Beurré Benoits.

Size, large, about two and three quarters inches long and three in diameter; *Form*, roundish, depressed slightly at each end, with a somewhat uneven surface, irregular in shape; *Stem*, short, about half an inch long, stout, thick, swollen at the base, and inserted without any cavity; *Skin*, fair, smooth, clear dull green, bronzed with red on the sunny side, and dotted with small russet specks; *Eye*, small, open, and slightly depressed in a very shallow basin; segments of the calyx, short; *Flesh*, greenish white, coarse, melting and very juicy; *Flavor*, rich, vinous and sprightly, with a delicious musky aroma; *Core*, large, slightly gritty; *Seeds*, small, obovate, brown. Ripe in October.

165. Supreme de Quimper. *Mag. of Horticulture*, Vol. XVII, p. 399.

This new and very fine early pear *(fig. 5)* fruited for the first time in our collection in 1851, when it appeared to possess many excellent qualities: the past season it again bore abundantly, fully sustaining its previous reputation. Its origin is unknown to us. In the Belgian catalogues the name is given to two different pears, one ripening in summer and the other in winter; but after a careful examination of the best authorities, we believe the true Supreme de Quimper to be a summer pear. We received our trees from M. Jamin, of Paris.

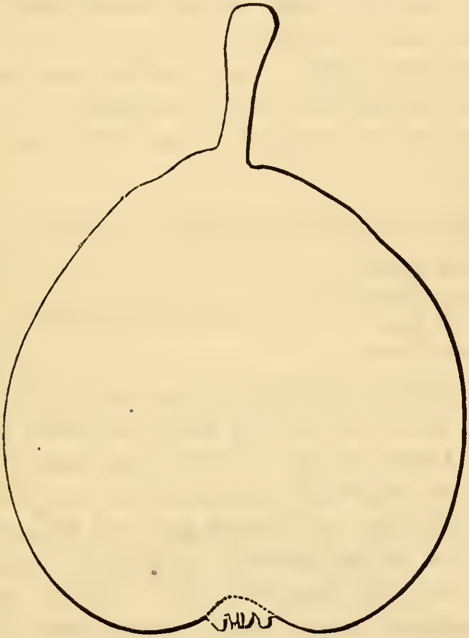


Fig. 5. Supreme de Quimper.

The fruit is of medium size, remarkably fair, with a beautiful red cheek, and though not high flavored, is a very juicy, refreshing and excellent pear, ripening about the middle of August. The tree is a strong grower, with a very erect and upright habit, and succeeds well upon the quince. Wood unusually stout, brownish olive.

Size, medium, about two and a half inches long and two and a half in diameter; *Form*, roundish obovate, full in the middle, rounding off to the stem; *Skin*, fair, smooth, lemon yellow, broadly shaded with brilliant red in the sun, and covered with conspicuous russet specks; *Stem*, short, stout, about half an inch long, straight, and obliquely attached to the fruit, without any cavity, on the small, obtuse end; *Eye*, medium size, partially open, and moderately sunk in a rather small shallow basin; segments of the calyx, short, projecting; *Flesh*, yellowish white, coarse, melting and very juicy; *Flavor*, rich, sugary, and slightly perfumed; *Core*, medium size; *Seeds*, medium size, pale brown. Ripe the middle of August.

166. BEURRE′ GRIS D'HIVER NOUVEAU. *Hort. Soc. Cat.*, 1842.

Beurré Gris d'hiver,
Beurré gris Superieure,
Beurré de Lucon,
St. Michael d'hiver,
} of some Foreign Collections.

We have doubted whether this fine pear (*fig.* 6) should be encumbered with such a long name as Beurré gris d'hiver nouveau. Among all the varieties that have been introduced into our collections, we have never seen a Beurré gris d'hiver distinct from the Beurré gris, and we have doubted the propriety of adding the word nouveau to a name already sufficiently long for convenient use. Bivort, pretty good authority, calls it simply Beurré Gris d'hiver, and unless there is such a variety, it should be retained for this. However, in the chaos of nomenclature it is difficult to get at the true name, and until we have more information in regard to it, it may be as well to designate it as above.

In general appearance it greatly resembles the old Brown Beurré, (Beurré gris,) but it is rather more obtuse at the stem, and with a darker russet skin. It is a fruit of much excellence, ripening in mid-winter, when we are not over-stocked with fine pears. It is of good size, with a rich melting flesh, and highly aromatized. Though its cultivation is yet rather limited, it promises to become a popular pear.

Tree rather an indifferent grower, with irregular branches, not unlike in habit the Beurré Rance. Wood, dark reddish brown.

Size, large, about three inches long and three in diameter; *Form*, obovate, slightly one sided, tolerably full at the crown, tapering little to the stem end, which is very obtuse; *Skin*, slightly rough, dull yellow, nearly or quite covered with a rather dark cinnamon russet, bronzed on the sunny side, and dotted with dark specks; *Stem*, short, about half an inch long, rather stout, curved, fleshy at the base, and obliquely inserted, without much of a cavity, with a high projection on one side; *Eye*, small, open, and slightly depressed in a small smooth basin; segments of the calyx, short, rounded; *Flesh*, yellowish white, coarse, melting and juicy; *Flavor*, rich, vinous, sprightly, and pleasantly aromatized; *Core*, large, slightly gritty; *Seeds*, medium size, deep brown. Ripe in December, and keeps till February.

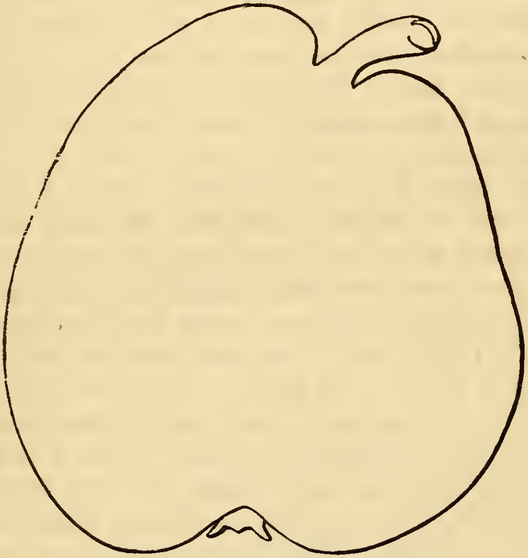


Fig. 6. *Beurré Gris d'hiver Nouveau.*

167. DOYENNE′ GRAY. *London Hort. Soc. Catalogue*, 1842.

Doyenné Gris,
Red Doyenné,
Gray Dean's,
Doyenné d'Automne,
Doyenné Rouge,
Doyenné Galeux,
St. Michael Doré,
Red Beurré,
Beurré Rouge, } of some.
Duc De Brabant, ?

} According to *Hort. Soc. Catalogue.*

The Gray Doyenné *(fig. 7)* is one of the finest of the older pears, and merits a place in every choice collection. In the growth of the tree, size and form of the leaves, color of the wood, &c., it is a perfect counterpart of the White Doyenné, and is undoubtedly a sport from that fine variety. The fruit is similar in form, but the skin is of a rich mellow cinnamon russet hue, and the flesh is more firm and less watery than the White; it has also the good property of keeping much longer after being gathered from the tree.

The Gray and the White Doyenné, according to the *Pomological Magazine*, have often been confounded with each other, though we do not see how this could well be. Poiteau and Noisette both figure it under the name of Doyenné Roux; and the same error is made in the *Transactions* of the London Horticultural Society, where it is described and figured under the same name, (Vol. I, p. 230.) Trees received from various sources in France, under the above synonyms, have all proved to be nothing but the Gray Doyenné. We have received a *new* pear, under the name of Duc de Brabant, which proves to be the Gray Doyenné, though we are not certain but there may be a Duc de Brabant, a perfectly distinct variety.

It grows very freely on the quince, as much so as the White, and appears to do best on that stock. We have not known an instance of its blighting like the White, though it may do so in some places. Our trees, in a deep rich soil, produced magnificent specimens the last year, measuring nearly *ten* inches in circumference. It remains in eating a long time, and does not decay so rapidly as the White; it is likewise ten days or a fortnight later than the latter sort.

Size, large, about three inches long, and three inches in diameter; *Form*, obovate, regular, full at the crown, tapering to a very obtuse point at the stem; *Skin*, fair, smooth, of a uniform bright cinnamon russet, covered with minute darker russet specks; *Stem*, about half an inch long, moderately stout, curved, and rather deeply inserted in a narrow cavity, swollen on one side; *Eye*, small, closed, and very slightly depressed in a shallow crumpled basin; segments of the calyx, fleshy, stiff, projecting; *Flesh*, white, coarse, melting, and very juicy; *Flavor*, rich, sugary, and brisk, with a fine musky perfume; *Core*, large; *Seeds*, medium size, very plump. Ripe in October.

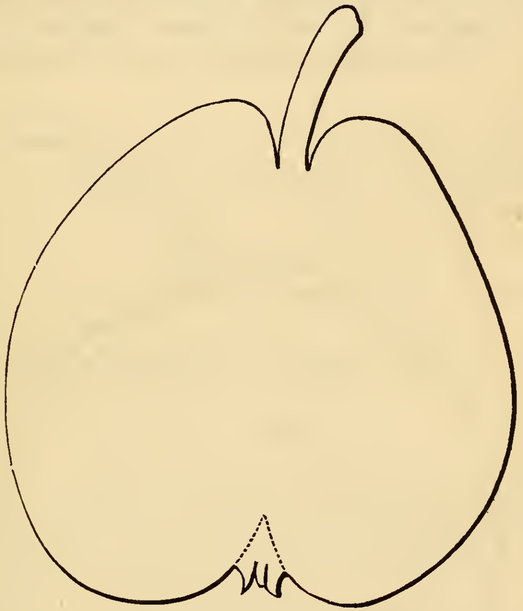


Fig. 7. Gray Doyenné.

169. BERGAMOTTE CADETTE. *Hort. Soc. Catalogue*, 1842.

De Cadet,	According to *Hort. Soc. Catalogue.*
Ognonet, (of some,)	
Beauchamps,	
Beurré Beauchamps,	
Caennais,	of some European Collections.
Ananas,	

Under all these names, and two or three more, we have received this pear (*fig.* 8) from various European and Continental collections. It is one of the older pears, described by La Quintinye and subsequent authors, and more recently by Mr. R. Thompson, in the *Gardeners' Chronicle* for 1845, (p. 816.) It is not so high flavored as many other sorts, but its general qualities are so good, that it well deserves cultivation. The tree is a good grower on the pear or quince; it is a most abundant bearer, so much so that it requires a good thinning to have fine large specimens. It begins to ripen in

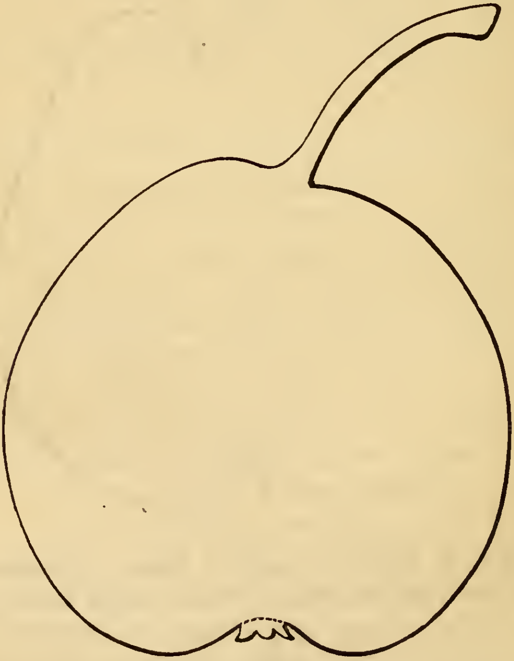


Fig. 8. *Bergamotte Cadette.*

October, and continues to mature gradually till January; on this account being one of the most useful varieties. It never decays or rots at the core.

Tree upright, pyramidal, making long annual shoots, of a light olive brown.

Size, medium, about two and three quarters inches long, and about the same in diameter; *Form*, round, narrowing very little to the stem; *Skin*, fair, smooth, greenish yellow, occasionally tinged with pale blush on the sunny side, and dotted with large, conspicuous greenish russet specks; *Stem*, long, about one and a half inches in length, moderately stout, curved, and obliquely inserted in a small, shallow cavity; *Eye*, medium size, open, and slightly sunk in a shallow basin; segments of the calyx, short, thick, reflexed; *Flesh*, white, fine, buttery, melting and juicy; *Flavor*, sugary and rich, with a peculiar and pleasant aroma; *Core*, medium size; *Seeds*, large, rather flattened. Ripe from November to January.

MISCELLANEOUS INTELLIGENCE.

ART. I. *Societies.*

CAYUGA COUNTY HORTICULTURAL.

The annual meeting of the Cayuga County Horticultural Society was held on the 8th day of February, 1854, at Auburn, N. Y., and the following named persons were elected officers for the current year:—

President—George E. Barber, Auburn.

Vice Presidents—P. R. Freeoff, Auburn; John Morse, Aurelius; O. W. Wheeler, Auburn; John R. Page, Samett.

Corresponding Secretary—Horace T. Cook, Auburn.

Recording Secretary—Lewis Paddock, Auburn.

Treasurer—John S. Clary, Auburn.

Managers—William Osborn, H. T. Dickinson, L. Q. Sherwood, W. D. Osborn, H. S. Dunning, A. V. Pulsifer, James L. Jenkins, William Cutting, Orrin Burdick.

Committee on Premiums—B. F. Hall, P. R. Freeoff, George E. Barber, O. W. Wheeler, John Morse.—Yours truly, HORACE T. COOK, *Cor. Sec'y.*

Auburn, Feb., 1854.

CINCINNATI HORTICULTURAL.

The annual meeting of this society was held on the 9th of January, and the following officers chosen for the current year:—

President—Wm. S. Hatch.

Vice Presidents—N. B. Shaler, Geo. Graham, A. H. Ernst.

Treasurer—William Storms.

Recording and Corresponding Secretary—Jno. A. Warder.

Council—R. Buchanan, M. M. Williams, M. Kelly, D. McAvoy, W. Heaver, R. Kelly, J. G. Anthony.

Librarian—J. W. Ward.

Fruit Committee—F. G. Carey, J. Sayers, Dr. S. Mosher, M. McWilliams, S. S. Jackson.

Flower Committee—F. Pentland, G. Heath, F. W. Ward.

Vegetable Committee—J. Dunlap, E. Kelly.—*(Hort. Rev.)*

PENNSYLVANIA HORTICULTURAL.

The annual meeting of the society was held on Friday, January 17th, when the following officers were chosen:—

President—Gen. Robert Patterson.

Vice Presidents—James Dundas, W. D. Brinckle, M. D., Richard Price, Robert Cornelius.

Treasurer— John Thomas.

Corresponding Secretary—Thomas C. Percival.

Recording Secretary—Thomas P. James.

Professor of Entomology—Samuel S. Haldeman, A. M.

Professor of Botany—William Darlington, M. D.

Professor of Horticultural Chemistry—Robert Hare, M. D.

The usual Ad Interim Report was read, for which we have no room this month.

The President announced that he had received from Commodore Perry of the Japan expedition, a small package of seeds, and a letter which was read, purporting that the seeds were a present to the Society, and requesting that if new and interesting the credit be given to the Expedition.

HORTICULTURAL OPERATIONS

FOR MARCH.

FRUIT DEPARTMENT.

The month of February has been as cold and unpleasant as January, with an unusual number of sunless days, and alternate storms of rain and snow, and remarkable variations of temperature. The winter thus far has been more severe than any for several years. The thermometer has fallen below zero several times, twice to 12° below, and in various parts of New England to 15°, 18°, 20°, and even 30° below. Just as we write this, a storm is prevailing, in which nearly two feet of snow fell, from New York to Washington, a greater quantity than has fallen before in the same places for a long time. It has been a severe month for forcing, and everything is more backward than usual.

GRAPE VINES in the early houses will now have advanced to that stage to require immediate thinning. Strong fires have somewhat weakened the growth, but a turn of fine sunny weather would soon give them strength; vines in the greenhouse are just now breaking, or perhaps in some cases have advanced a few inches; continue to syringe freely in good weather till the flowers are nearly ready to open. Cold houses will require attention towards the last of the month, or even sooner, if warm; air in season to prevent danger of too early growth. Vines in the open air may still be pruned and put in order.

PEACH TREES in pots will now be swelling up their fruit; air abundantly in good weather, and do not forward them too rapidly, or they will be liable to drop their fruit. Water rather more liberally now. Bring in fresh trees for a succession.

FIGS AND VINES in pots may be still brought in for a succession crop.

PRUNING TREES should now be proceeded with as rapidly as possible; by the last of the month canker-worm grubs will begin to run, when the tree should be protected by a circle of tar.

CURRANTS AND GOOSEBERRIES should be pruned this month.

SCIONS of trees should nearly all be cut this month.

ROOT GRAFTING may yet be practised by all who like this mode of propagation. *Economy* is the order of the day.

FLOWER DEPARTMENT.

Another severe month has not in any way benefited the growth of in-door plants. High night temperature, impossible to be entirely obviated when the thermometer is below zero, especially in that part of the houses near the furnace, has created an undue excitement, which an abundance of fresh air and sunlight alone can remedy; but after three months of unusual cold, we may look for a mild one with the advance of spring.

CAMELLIAS are now getting over their bloom, and already show signs of breaking their wood buds; as soon as this is perceived encourage it by frequent syringing, and more water at the root; shade from the hot sun, if liable to burn the leaves, and prune and shape the plants if fine specimens are an object. Inarch and graft now.

JAPAN LILIES potted in January will now show themselves above the soil, and will require occasional watering. Place in a cool situation near the glass.

PELARGONIUMS will be advancing; tie out the branches carefully, and cut out such as are too crowded. Nip the tops of those intended for late blooming.

HEATHS will require attention now; repot all that need it, and top dress others. Keep them very cool, as a rank and spindling growth will be fatal to them in summer; nip in all shoots which show a tendency to lead off out of shape.

ROSES in small pots, now shifted into larger size, will make fine strong plants before June; put in fresh cuttings for a new stock.

ACHIMENES AND GLOXINIAS should now receive more attention; shift into single pots, and give them the warmest berth in the house.

AZALEAS will now be in all their glory; water more liberally, and shade the plants from the mid-day sun. Young stock may be shifted now if a good growth is wanted.

STEPHANOTUS FLORIBUNDUS, and other summer flowering twining plants, should now be headed in, repotted, and have a warm situation, with a little bottom heat to give them a good "break;" after which they will go on finely in any good place in the house.

FUCHSIAS should now have attention; shake off the old soil from the roots and pot afresh; head in and shape the plants, and give occasional syringing till they are well furnished with young shoots.

VERBENAS may have a shift now if fine large plants are wanted.

CINERARIAS will require care; repot if they need it; keep down the green fly by fumigation.

CALCEOLARIAS will require repotting.

BIGNONIA VENUSTA will require heading in before it begins to grow.

CACTUSES, now showing buds, will require more liberal watering.

SALVIAS, HELIOTROPES, PETUNIAS, &c., should be propagated for a stock for bedding out in summer.

SOW SEEDS of all kinds of early flowering or tender annuals.

DAISIES, POLYANTHUSES, PANSIES, &c., wintered in frames, may now be opened and aired in good weather; if protected during cold nights they will soon be in flower.

VEGETABLE GARDEN.

Additional hotbeds should now be made where there is much forcing to be done. Those in which the heat is exhausted by the recent cold weather, should have a good lining of hot dung, to keep up the temperature to 75 or 85°.

CUCUMBERS raised last month should now be hilled out.

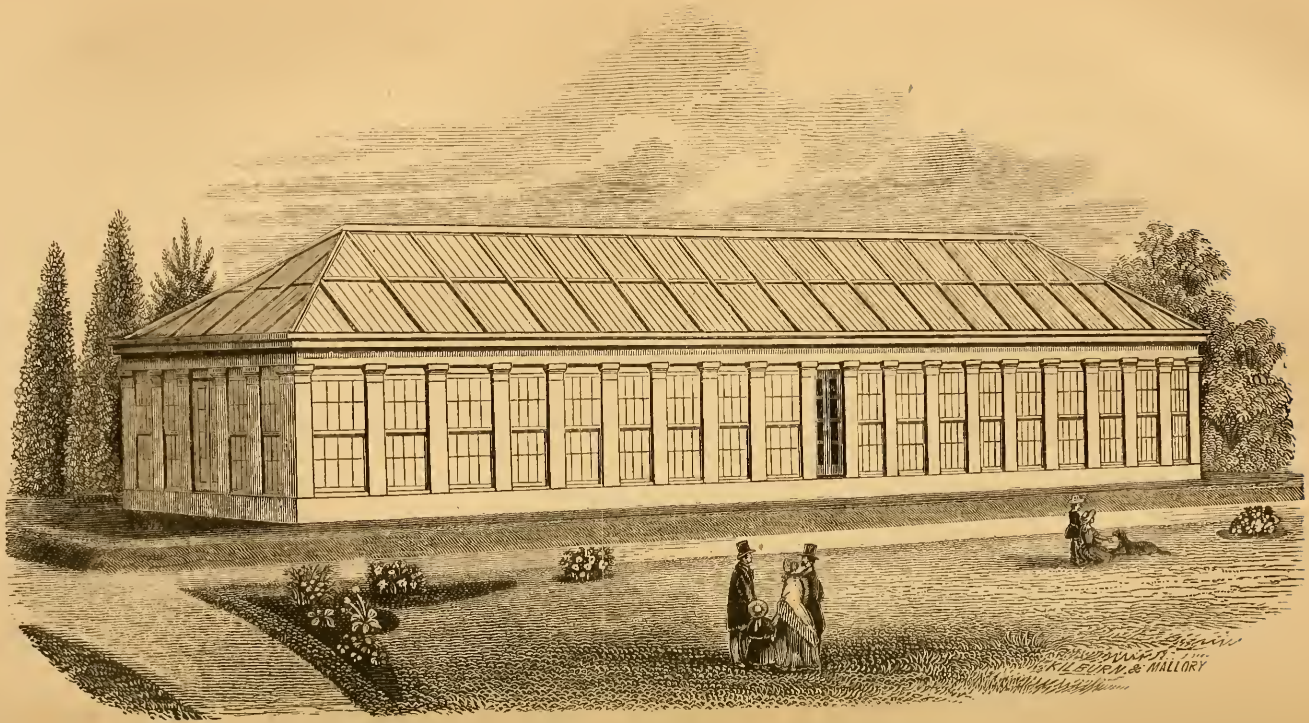
TOMATOES may be potted off singly, and fine large plants obtained by the first of May.

ASPARAGUS BEDS may have attention as soon as the frost is out of the ground; enrich, fork over, and level the surface before the heads begin to grow.

PEAS may be sown in the open ground, as soon as the frost is out.

RHUBARB ROOTS, covered with a barrow of hot manure, will start much earlier and a good crop obtained some time before those treated in the ordinary way.

Continue to sow Egg Plants, Melons, Cauliflowers, Lettuces, Peppers, Cabbages, Broccoli, &c., &c.



CONSERVATORY OR CAMELLIA HOUSE OF MESSRS. HOVEY & CO.

THE MAGAZINE
OF
HORTICULTURE.

APRIL, 1854.

ORIGINAL COMMUNICATIONS.

Art. I. *Description of the Conservatory or Camellia House of Messrs. Hovey & Co.*

There has been a very perceptible improvement in the construction of greenhouses, graperies, and other garden structures, during the last ten years. Formerly, except in the grounds of gentlemen of wealth, it was rare to find anything more than the mere shell of a house, built without any regard to proportions, or principles of architectural taste, and in the rudest and cheapest possible manner, as if they did not deserve the expenditure of much money:—that at best they were but a temporary kind of building, and if only sufficient to keep out the cold of winter, everything was accomplished necessary to protect the plants until the return of warm weather.

As ordinarily built, with lean-to roofs, greenhouses and graperies are no addition to the general beauty and expression of a building, and hence they have been placed in the kitchen garden, or distant part of the pleasure ground, forming a feature by themselves. This was the plan in almost all cases in the finer English residences of the last century. But with the improved modes of construction, the substitution of iron for wood, the introduction of the curvilinear form of roof, and the manufacture of sheet glass, an entire change has taken place, and at the present time the most light, expressive, and elegant buildings are constructed, which rather add to, than diminish, the harmony and arrangement of many styles of domestic architecture. The construction of the Crystal Palaces of London and New York is an example of the important use which can be made of iron and glass in the erection of greenhouses, conservatories, graperies, &c., where expense is not an object. The luxury of a summer garden can now be enjoyed through our long and severe winters, in connection with the drawing-room, the parlor, or the library. There will be no necessity for braving the cold or snow, to reach the conservatory, distant a long way from the house, often so far as to be rarely visited by the family in winter.

To aid in improving the construction of plant houses of every description has ever been our object, and we have in our past volumes given the dimensions and general arrangement of many in various parts of the country. The curvilinear form of building cold graperies, first introduced here by Horace Gray, Esq., at his place in Newton, now owned by W. C. Strong, has been minutely described and illustrated in our volume for 1846, (XII, p. 377,) and many houses have since been erected on the same plan. Within a few years many very beautiful conservatories have been put up, which are good models of their kind, and it is our intention to give engravings of some of the best. For some time we have had a drawing prepared of the conservatory of Messrs. Hovey & Co., a building admirably adapted to the growth of plants, and at the same time of handsome proportions, and one which would have an attractive appearance, in connection with the dwelling-house, or standing detached as it now does, fronting a lawn of an acre or more in extent. It will serve as a model for all who wish to put up a similar structure, combining the advantages of cultivating grapes and plants, particularly camellias, orange trees, and similar showy and fine shrubs. We annex a ground plan, and the perspective of the lawn front, (see frontispiece, *fig.* 9.)

The ground plan (*fig.* 10,) shows the dimensions of the conservatory, and the terrace or border, which is surrounded with a grass embankment. The main entrance is from the street front by an avenue one hundred and sixty feet long, and twelve broad. The terrace is elevated twenty inches above the walks and lawn, and the floor of the conservatory one foot above the level of the terrace. The house is eighty-four feet long, and twenty-two feet wide. The front and back, nine feet high to the eaves, and sixteen feet high in the centre. The building for the offices, &c., is twenty feet long and sixteen feet wide, and finished with pilasters and architraves, like the lawn front. All the sashes of the front, ends and back run down to the floor. Every other sash opens at the top, sliding down, and every alternate one at the bottom, lifting up; every other upper sash in the roof, both front and back, slides down, which allows of the admission of abundance of air. There is a door at each end, and at the front, made with French casements. The ends and back sashes are fitted with shutters, fastening with bolts on the sides, which are closed day and night, until the favorable weather of spring. In a house so exposed on all sides this is necessary to keep up an even temperature, without great consumption of fuel.

The interior arrangements are as follows:—A walk runs through the house in the centre, 3½ feet wide. The side and end walks are next to the outer walls, and are 3 feet wide. The cross middle walk, from the entrance front, is 4 feet wide. Each of the areas for large plants, and the plant stages, are surrounded with a curbing of plank 6 inches wide, and 2 inches above the walk, which gives the whole a neat finish. Each of the areas and stages occupy a space about 36 feet long, and 5¾ wide. The stages have 9 shelves each, 8 of them 6 inches wide, with 6 inches rise, and the top one, for large plants, 10 inches broad. The first shelf is 2 feet from the floor, and the space below is fitted with neat lattice work. On each side of the centre walk are 10 columns, 5 inches in diameter at the base, handsomely arched at the top, but with square shafts springing from the base of the arches, to the rafters, to support the roof, a distance of 6 feet. On these columns the finest kinds of climbing roses are twined, the roots being set out in the soil beneath the floor. When in full bloom, which is a greater part of the year, they form one of the most beautiful features of the house. A shelf, 5 inches wide, runs entirely around the house, within 10 inches of the glass; and another shelf, 6 inches wide, commencing at the sashes on the back at one end, runs to the sashes at the back on the other end, just level with the top of the lower front sash. This shelf will hold a great number of plants, which flourish well and form a prominent object at all times.

The rafters are fitted with trellises, with supports of the anchor pattern for the grape vines, which are planted outside, and brought through the wall, underneath the base of the wood work, and are kept to a clean stem until they reach the top of the house at the sides. Underneath the stage are

a a, Furnaces for heating the conservatory. These are placed in the cellar beneath the floor of the bouquet and potting rooms, which is sufficiently large to hold from ten to twenty tons of coal. They are reached by five steps—that under the bouquet room by a trap door, as it is only a reserve flue, to be used in very cold weather. The furnace under the potting room is fitted with a boiler, which heats the hot water apparatus for warming the conservatory.

b b, Brick flues—that from the furnace below the potting room running across the house, and returning by its side to the chimney, as shown by the dotted lines. The other flue runs round half of the house, as also shown by the dotted lines, to the other chimney. No fire is required in this flue, only when the temperature of the open air descends nearly to zero.

c c, Hot water apparatus. A flow and return pipe runs nearly the entire circuit of the house, below the walks, which are of lattice work, to the reservoir *d*. The pipes are four inches in diameter.

d, Reservoir, four feet long, eighteen inches deep, and twelve inches wide.

e, Pump, with pipe leading from the cistern *f*.

f, Cistern, ten feet deep and eight feet in diameter. It is supplied with rain water from the gutters of the roof, the conduit from the gutter in the angle on the left hand side being carried through the cellar, and under the ground outside to the cistern. With the exception of very long droughts, it affords an abundant supply of soft water.

g, Potting bench. Rather limited for room, but as the principal part of the plants, especially camellias and azaleas, are shifted after they are removed to the open air, it answers every purpose. Compost is stored in bins or barrels in the cellar below.

The coal and fuel are thrown into the cellar through an opening in the wall on the side opposite the cistern, which is neatly fitted with a curbing, and a door to close up tight.

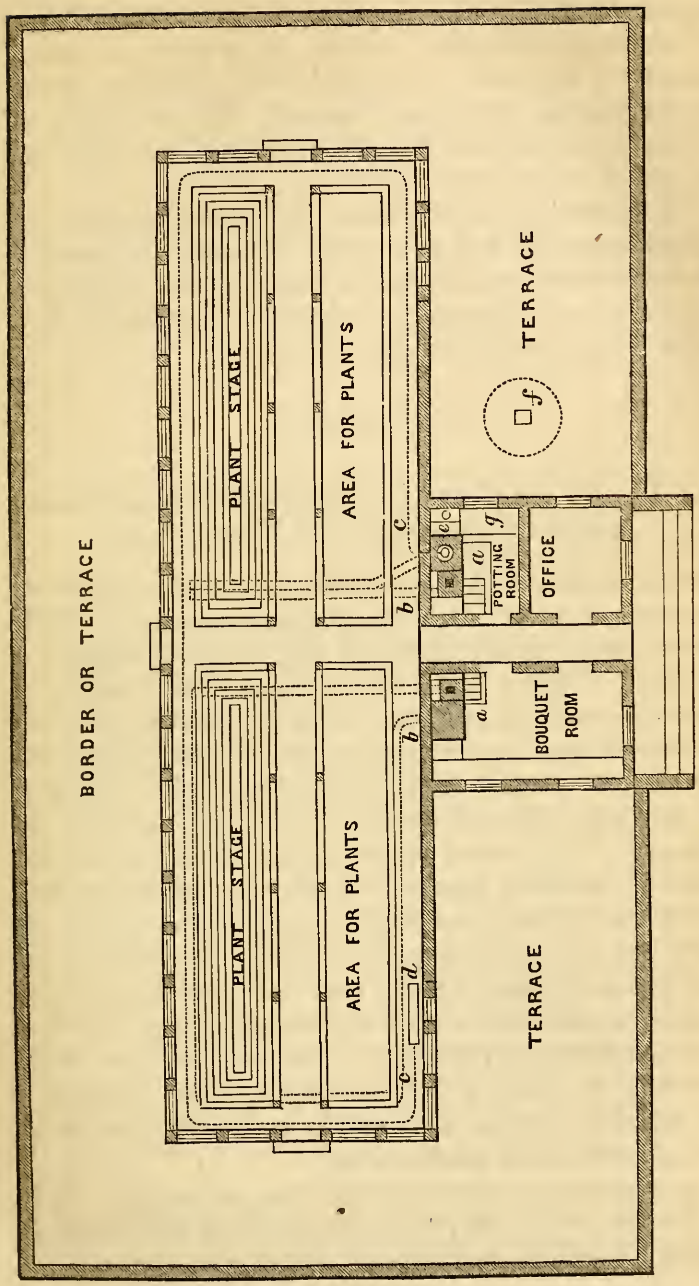


Fig. 10. *Ground Plan of the Conservatory of Messrs. Hovey & Co.* (Scale, 16 feet to the inch.)

shelves for storing away oxalises, bulbs of various sorts, achimenes, gloxinias, &c., until the proper season of potting arrives. A trap door in the centre walk, with steps, readily admits of access to the space beneath. All the weights for balancing the sashes are hung at the back of the house, and are placed beneath the floor.

These details, with the aid of the ground plan and perspective elevation, will give all the information necessary to erect a conservatory on a similar plan, whether of larger or smaller extent, presuming, of course, the proportions as to width, length, height, &c. are preserved.

ART. II. *On the Means of multiplying the Smaller Birds around our Dwellings.* By WILSON FLAGG.

THE presence of birds as companions of a country residence is considered by all a desirable circumstance, second only to woods, flowers, green fields, and the general advantages of prospect. Without birds, the landscape, if not wanting in beauty, would lack something which is necessary to the happiness of all men who are elevated above a state of gross sensualism. It is indeed highly probable that nature owes more to the lively motions, songs and chattering of birds, for the influence of her charms, than to any other single accompaniment of terrestrial scenery. They are so intimately associated with all that is delightful in field and forest, with our early walks in the morning, our rest at noonday, and our meditations at sunset, with the trees that spread their branches over our heads, and the vines and delicate mosses at our feet, that it is difficult to think of the one apart from the others. Through the voices of birds nature may be said to speak to us, and without them she would be but a dumb companion, whose beauty could hardly be felt.

It is customary, when speaking of the advantages of birds, to treat of them as they have relation to the agricultural interest. Admitting the value of almost every species as destroyers of insects, I am disposed to consider their importance in this respect as only secondary to that which regards their pleasant companionship with man. Hence it is a matter of no small consequence to use the best means that have been discovered, to preserve the birds from destruction, and to multiply them about our dwellings. Very little attention has been paid to this subject. A few laws have been made for their preservation; but these have seldom been enforced. Occasionally a paragraph in the newspapers has pleaded for their protection; but as yet no full and elaborate essay, devoted to this object, has made its appearance. I believe the farmer would promote his own thrift by extending a watchful care over the lives of every species of birds; but the smaller tribes are considered the most useful. And it would seem as if nature had given them their beauty of plumage, and endowed them with song, on purpose to render them attractive, that man might thereby be induced to preserve a race of creatures so necessary to his pleasures, and so valuable to his interest.

There are two methods of preserving the birds: the first consists in omitting to destroy them; the second in promoting the growth of certain trees, shrubs and other plants on which they depend for shelter and subsistence. The birds, considered in relation to trees and shrubbery, may be divided into two classes. First, the familiar birds that live in our orchards and gardens, and increase in numbers in proportion as the woods are cleared, and the lands devoted to tillage. To this class belong several of our sparrows, the wren, the blue-bird, the American robin, the bobolink, the linnet, the yellow-bird, and some others. The second are the less familiar birds that frequent the woods and wild pastures, and which would probably be exterminated by reducing the whole forest to park or tillage. Among these may be named the little wood-sparrow, one of the sweetest of American songsters, nearly all the thrushes, the towee finch, and many of the *sylvias*, and woodpeckers.

To preserve the first of these species little is necessary to be done except to avoid destroying them: but to insure the multiplication of the second, we must study their haunts, the substances provided by nature for their food, the plants that afford them shelter, and to a certain extent labor to preserve all these for their use. The little brown sparrow is never heard in the heart of our villages, unless they are closely surrounded by woods. Yet this bird does not live in the woods. He frequents the pastures which are overgrown with wild shrubs, and their undergrowth of vines, mosses and ferns that unite them imperceptibly with the green sward by which they are surrounded. He is always found in the whortleberry pastures, and probably makes his repast on these simple fruits in their season. He builds his nest on the ground, in a mossy knoll, under the protection of a thicket. Every bird is more or less attached to a particular character of grounds and shrubbery; and if we destroy this character, we drive this particular species from our neighborhood, to seek in other places its natural habitats. Hence we may account for the comparative silence that pervades the grounds of some of our most admired country seats; for with respect to the wants of our most familiar birds, it is possible that cultivation may be carried too far.

There is no danger that, for many years to come, our lands will be so entirely stripped of their native growth of herbs, trees and shrubs, as to leave the birds without their natural shelter. But there is danger that they may be wholly driven out of particular localities, and that the inhabitants may thereby be deprived of the presence of many delightful warblers. In these densely populated districts, the want of them would be the more painfully felt, because they contain a greater number of cultivated people who can appreciate these blessings of nature. Let us then proceed in our inquiry concerning the means by which we may multiply the birds around our habitations.

In every locality in which all the native species of birds are abundant, we find the following conditions:—First, there is a large proportion of cultivated land, numerous and thrifty orchards, extensive fields of grass and grain, all well provided with water-courses. When these conditions are present, the familiar birds already named will be numerous. If these cultivated lands are well intermingled with pastures abounding in thickets and wild shrubbery, and all the indigenous undergrowth belonging to the same, we may then hear the voices of the less familiar birds, which are in many respects superior in song to the tenants of our orchards and gardens. Wild shrubbery and its carpet of grasses, vines, mosses, and other cryptogamous plants, form the condition that is necessary to the preservation of the half-familiar tribes. If, with all these circumstances, the land has a good proportion of wood in its primitive state, or in one resembling it, not divested of its undergrowth, containing a large variety of oaks, maples, pines, junipers, sumachs and cornels, we may find the wood-thrush, the hermit-thrush, the red-start, the oven-bird, the creeper, the jay, and woodpeckers of various species whose habitats are the wild-woods.

Among the shrubs that are most useful to the birds may be named in general all that produce a wholesome seed or fruit. The viburnums, the cornels, all the species of the whortleberry tribe, the elder, the *Celastrus scandens* and the common sumachs are always abundant where there are goodly numbers of the less familiar birds. Among the herbs and smaller plants that are useful to them are the Solomon's seal, the partridge berry, the *Michella repens*, the dew-berry, or evergreen blackberry, and all the indigenous grasses. If we clear our woods of their undergrowth, and convert them into parks, we do in the same proportion diminish the numbers of certain species of birds. A partial clearing is undoubtedly beneficial even to the most solitary tribes, by promoting a greater variety of vegetation. But the removal of all this miscellaneous undergrowth would serve as effectually to banish the red thrush, the cat-bird, the wood and hermit thrush, and many species of *sylvias*, as we should extirpate the squirrels by destroying all the oaks, beeches, hazles, hickories and chestnuts.

One of the principal ornaments of a country seat is lawn. A smooth shaven green is delightful to the eye, at all times, especially when just emerging from the city, or after one has been for some hours rambling among the rude scenes of nature. But lawn is a luxury that is obtained at the expense of all birds that nestle in the ground and the low shrubbery. The scythe may be as great an exterminator of such birds, as the gun of the fowler. The song-sparrows build their nest upon the ground, in the most familiar places, where they can feel secure from disturbance. Not a rod from our dwellings these little birds may have their nests, if the right conditions are there. They are commonly built on the side of a mound, where the grasses and mosses are overrun with blackberry vines and wild rose bushes. Familiar as they are, they do not nestle among exotics. He who would entice them to breed in his enclosures must not be too particular in preserving that kind of neatness in his grounds, which consists in eradicating every native shrub and wild briar, as a useless weed.

Hedge-rows, though often ignorantly supposed to be the nurseries of birds, are really great checks to their multiplication. A hedge-row cannot be well maintained without care in keeping its roots clear of grass and other herbage, which are important to their wants; and the habit of clipping it renders it almost barren of fruit. I am inclined to think that, for picturesque effects, no less than for the benefit of the birds, the most desirable fence is one made of rough small timber passed through upright posts. I would then encourage the growth of all kinds of native shrubbery, on each side of it, forming a miscellaneous hedge, the more agreeable because unshorn by art. It is this spontaneous growth of shrubbery and other wild plants that constitutes one of the picturesque charms of the old New England stone-wall. We seldom see one that is not covered on each side, more or less, with roses, brambles, spiræa, viburnums and other native vines and shrubs, so that in some of our open fields, the stone-walls, with their accompaniment of vines, flowers and shrubbery are the most attractive objects in the landscape. Along the base of these walls, where the plough does not reach, nature calls out the rue-leaved anemone, the violet, the cranesbill, the bell-wort, the delicate pink convolvulus, and many other native flowers of exceeding beauty, while the rest of the field is devoted to tillage.

An ignorant agricultural boor, whose mind was never taught to stray beyond the barn-yard or potato patch, might grudge nature this narrow strip on each side of his fences, though she never fails to crowd it with beauty. I have seen indeed intelligent farmers who seemed to consider it an offence against neatness and order to allow nature these little privileges, and who employed their hired men to keep down every plant, that dared to peep out from underneath the fence, without a license from the cultivator. By encouraging this miscellaneous growth of woody and herbaceous plants on each side of every rustic fence, we provide an important means of security for the birds, and supply them, in the close vicinity of our dwellings, with an abundance of those seeds and berries which are necessary for their subsistence.

Such a miscellaneous hedge-row would constitute a perfect aviary for certain species of birds; and the advantages they would confer upon the farmer, by ridding his land of noxious insects, would amply compensate for the space thus left unimproved. The farmer seldom raises any crops in this narrow space; but, like the dog in the manger, he neither uses it himself nor will he leave it to nature and the birds. Once in two or three years, he lets a fire run over it; or, at an expense which is entirely useless to himself, he wantonly cuts down every beautiful thing that springs up there to remind him, while employed in the labors of the field, of the primitive charms of nature.

A common hedge-row would employ as much space as this rustic fence, including the plants on each side of it; and no clipped hedge-row could be made half so beautiful as one formed by this wild thicket of vines and bushes, growing at liberty, and wreathing an endless variety of blossoms and foliage around and over the fence. Then might we hear the notes of the woodsparrow and the yellow throat in the very centre of our villages, and hundreds of little birds of different species would cheer us by their warbling, where at present only an occasional solitary one is seen. From the windows of our dwelling-houses we might also observe the habits of many rare birds that would soon acquire an unwonted familiarity, by having their abodes in the busy neighborhood of man.

By thus extending our protection to the birds we make no sacrifice of land, and we lay the foundation for certain contrasts, that must affect every beholder with a pleasing emotion. A happy contrast is one of the most striking circumstances either in a landscape or a work of art. Hence rugged hills, rising suddenly out of a level and fertile plain, are more effective than general undulations of surface: and how much soever we may admire a tract of land in a high state of improvement, it is delightful while rambling over it to find a little miniature wilderness, or a plat of ground covered with the spontaneous productions of nature. It is equally pleasing, on the other hand, when we are roaming a forest, where everything that grows is wild and primitive, and where the only birds we hear are the shy and timid thrushes and sylvias, to encounter a little farm in a perfect state of cultivation, and a neat cottage, surrounded by the familiar birds of our orchards and gardens. These strips of wild vegetation bordering the fences would form a pleasant contrast with the cultivated lands, and the contrast would be beautiful in proportion to the entire primitive character of the one and the high state of improvement of the other.

From the earliest period of our history, it has been customary among our people to encourage the multiplication of swallows, by the erection of bird-houses in their gardens and enclosures. This custom was probably derived from the aborigines, who were in the habit of furnishing a hospitable retreat for the purple martin, by fixing hollow gourds or calabashes upon the branches of trees near their cabins. It is generally believed that these active little birds serve, by their unceasing annoyances, to drive away the hawks and crows from their vicinity, performing thereby an essential service to the farmer. This pleasing and useful custom has of late years grown unaccountably into disuse. The chattering of swallows is one of the delightful accompaniments of a vernal morning; and that of the martin, in particular, is the most enlivening of all sounds from animated nature. As the birds of the swallow-tribe subsist upon insects that inhabit the atmosphere, it is not in our power to increase their means of subsistence. Hence the only means we can use for increasing their numbers is to supply them with a shelter and retreat. By such appliances it would be easy to keep their numbers up to a level with the quantities of insects that constitute their prey.

The wren and the blue-bird are encouraged by similar accommodations. But as these birds are not social in their habits, a separate box must be supplied for each pair of birds. The wren is an indefatigable destroyer of insects, and one of the most interesting of our familiar songsters, singing like the riser, during the heat of the day, when most other birds are silent. The blue-bird, which is hardly less familiar, delights in the hollow branch of an old tree in the orchard, but would be equally satisfied with an artificial imitation of the rude conveniences supplied him by nature.

If we observe all these requirements, when employed in tilling a farm or in laying out a country-seat, we do but avoid the destruction of those beautiful relations which nature has established throughout the earth. The plough and the scythe may do their work for man, without interfering with the wants of those creatures whom nature has appointed as the enliveners of his toil. Every estate might be made to represent the whole country, in its tilled fields and cultivated lawn, with their proper admixture of forest, thicket and primitive herbage. Then, while sitting at our windows, the eye would be delighted by the sight of little coppices of wild shrubbery, with their undergrowth of mosses, ferns and Christmas evergreens, rising in the midst of the smooth lawn, and in charming opposition to the flower-beds, that are distributed in other parts of the ground. In these miniature wilds, the small birds would find a shelter, suited to all their wants and instincts, and in return for our hospitality, would act as the sentinels of our orchards and gardens, and the musicians to attend us in our daily labor and recreations.

Beverly, March, 1854.

ART. III. *On the Cultivation of the Pear Tree; in a Letter to the North Western Fruit Growers' Convention from Dr. J. P. Kirtland, Cleveland, Ohio.* Communicated by DR. KIRTLAND.

DEAR SIR:—Enclosed is a letter of mine addressed to the Fruit Growers' Convention at Chicago. In their *Proceedings* it appeared with many errors; it is now mostly correct, and if you deem the article worth the space in your Magazine, you can publish it.—Yours, J. P. KIRTLAND, *East Rockport, Ohio, Jan.* 30, 1854.

Fifty years since my attention was directed to the cultivation of the pear, by the observations of an old and experienced nurseryman. At that day there might be seen, in certain localities, a few lofty and venerable pear trees—the productions, perhaps, of the seventeenth century. They were still healthy and productive. The varieties were limited, but embraced, among others, the Summer Bon Chrétien, then known as the Summer Bell; one akin to the Julienne to the present day; and another universally denominated the *Summer* or *Harvest Pear*. This last I continue to cultivate, and consider it preferable to either the Madeleine or the Bloodgood; though I have never found it described in any work on fruits.

Few trees of recent growth were to be met with, and it was then, as at present, a popular belief that this fruit could not be cultivated with any prospect of success. Of course not many efforts were made, and they were illy directed. Their results, seemed, in most instances, to confirm the correctness of popular opinion; yet occasionally a young tree would thrive in spite of adverse circumstances.

In the year 1810, I first visited the northern parts of Ohio, and found seedling pear trees springing up in the most of the nurseries and orchards of the new settlers. In my subsequent visits, in the year 1818, and especially '23, I regretted to find that a large proportion of those seedlings were disappearing under the attacks of a disease said to be the "*fire blight.*" A few survived, and have continued healthy down to the present period.

During the summer of 1824, I reared an extensive nursery from the seed exclusively, and diffused the trees extensively over Northern Ohio and Western Pennsylvania. Like their predecessors, they soon disappeared; leaving, however, an occasional survivor behind.

I have recently had an opportunity to examine the lofty and beautiful pear trees on both margins of the Detroit River, in Michigan and Canada. These trees were planted by the early French population, and have survived from one to two centuries. Many of them were loaded with fruit at the time of my visit.

The day has past when horticulturists should, like our soap-making mothers *of old*, impute such diverse results to "*good* and *bad luck.*" The causes for the apparently opposite results of attempts at cultivating this fruit, are worthy of investigation. They, of course, exist, and their discovery may result in rendering future attempts successful beyond a contingency.

The *first* query naturally presented, is:

Why was the first stock of pear trees, reared in Connecticut, Ohio and Michigan, thus thrifty and healthy?

Two causes operated mainly in producing such an effect.

1st. The trees were reared exclusively from seed.

2d. The superficial virgin soil, in most localities, was rich in the accumulations from decaying vegetable and animal matters during thousands of years.

By reference to Professor Emmons' Analysis, published in the *Horticulturist*, Vol. II, page 300, it will be seen that the ash of the sap-wood of the pear tree contains more than 27 per cent. of phosphate of lime, 22 of potash, and a number of other inorganic elements.

It must be recollected that vegetables require their food as much as animals. If it be afforded in too restricted quantities, they both will be stinted in their growth, and predisposed to disease. Each must also have food of appropriate qualities. An absence of any one of the elements shown to exist in the ash of the pear will render the tree unhealthy, and probably soon occasion its death.

In almost every virgin soil the necessary food for the pear exists sufficient to ensure a rapid and healthy growth of one generation of trees. Cultivation of other crops, as well as the demands of the pear tree itself, soon takes up most of those elements existing in the superficial soils, especially the phosphate of lime.

The *second* query is:

Why have more recent attempts at rearing this tree been less successful than the first?

Two causes may be assigned.

1st. Suckers have been too commonly substituted for seeds in propagating this species of fruit, since the earliest generation of trees was produced in those several states. *Seedlings* are generally healthy—*suckers* never for any length of time. The circumstance of their springing from the roots is an evidence of pre-existing disease. That disease is sure to be inherited by every sucker. Their growth may be rapid for a time, but is akin to the malignant developments which sometimes occur in the animal frame, and is sure to end in premature disease and death.

2d. The second cause has created a more extensive influence. I allude to the exhaustion or deficiency of the necessary organic elements in the soil. A knowledge of the limited amounts in which they occur in our ordinary soils, which have been injudiciously cultivated for a number of years, will show to any scientific horticulturist the impossibility of rearing upon them successfully the pear tree. It is not a chameleon, which can live and grow fabulously by sipping wind. The young biped cannot draw its mother's milk by sucking an empty bottle; nor the pear imbibe a solution of phosphates and potash from a soil made up exclusively of insoluble flint and clay. In localities where these requisite elements are furnished but in too limited amount, this tree will exert its efforts mainly in producing blossom or fruit buds in excess, which of course will prove abortive the season ensuing, from a want of food, and very little new wood will be formed.

On the other hand, if most of those elements abound, but the main one—the phosphate of lime—be absent, or in a restricted amount, the tree will often make a vigorous effort at forming new wood; the leaves will be luxuriantly developed early in the season, and the shoots will rapidly elongate with a spongy texture, till the period arrives for making a draft on the soil to furnish the necessary amount of phosphates, in order to mature the young and tender growths. This draft usually occurs in the hot and sultry weather of June or July, and is not duly honored. The result is, the delicate tissues immediately die, a rapid chemical change occurs in them, and it is said that the tree died of the "*fire blight!*"

This disease is specifically distinct from the *frozen sap blight*, produced by the impression of frost; from the *canker blight*, often occurring in suckers; and from the *insect blight*, described in Dr. Harris's invaluable work on "Insects Injurious to Vegetation;" but is the *blight of innutrition.*

The insect blight has occasionally appeared in Ohio, on our pear, apple, medlar, quince and mountain ash trees.

A *third* query still presents itself:

Why, in certain localities, has the pear tree continued healthy, and endured to such extreme age?

To this may be replied, that some localities abound in their necessary food. The green sands and mass of the tertiary formations in New Jersey are rich in those elements. The debris of the trap-dykes, in some parts of Connecticut, contain them, especially potash in abundance; and there is little doubt that if the clays composing the banks of the Detroit River were analyzed, they would be found to contain more than a usual amount of the phosphates.

In some instances this tree is sustained for a long period of time by the accidental supply of food. The dead carcass of some large animal may have been deposited near its location: a pile of bones, leached ashes, decaying vegetable matter, the refuse of a slaughter-house, or night soil. Perhaps flocks of ducks, geese, hens or turkeys make their roosts on or under its boughs for days and months in succession. From these and similar sources phosphate of lime may be furnished.

Pear trees springing up in dense and neglected hedges are generally healthy, especially if they are the resort of quadrupeds and poultry.

In one instance I was familiar with a tree which attained an unusual size. It was standing near a smith's shop, and the owner, for a long series of years, had almost daily shod a large number of horses under its shade. The parings of their hoofs, as well as their adventitious droppings, contributed all the elements the tree required. Popular opinion attributed the effects to the iron rust and cinders scattered from the shop. It was common to see the population in the vicinity placing loads of cinders about their trees, and encumbering the limbs with horse shoes and sacks of old iron to "*keep off the blight.*"

Other collateral influences have favored these bi-centurians in certain localities. The pear tree requires a rather moist and tenacious soil; not, however, wet and saturated with stagnant water. If placed on a loamy or clayey soil, abounding in the requisite inorganic elements, with pure water percolating beneath at a depth at which it can merely be reached by the extreme roots, this tree will be as hardy, strong growing and durable as the oak.

Climate also exerts an influence over its health and prolificness. Contiguity to large bodies of water seems to temper the severity of the cold of winter, and prevents the occurrence of the *frozen sap blight;* and in summer the moist emanations prevent the scorching impressions of the sun, both on the foliage and fruit. Detroit and its vicinity are naturally furnished with the necessary requisites for producing this fruit on an extensive scale. Hundreds of acres of land might be advantageously employed for this purpose. If the population consult their own interests, and would develop the resources Providence has placed at their command, they will soon become the pear growers of the nation.

They might advantageously even ship, every autumn, thousands of bushels of the winter varieties to Europe.

All localities in our country are not naturally blessed as is Detroit, with the capabilities of rearing this fruit almost spontaneously. It is hoped that these views may not deter any one from attempting its cultivation in a judicious manner. The deficiencies which occur in moist soils may be, to some extent, artificially supplied. Animal bones, urine, the sweepings of the poultry-house and yard and guano, are the principal sources from whence the supplies must be furnished.

My own trees have been greatly improved, both in their vigor and productiveness, by burying about their roots large quantities of unground bones: time and weather break them down as rapidly as the trees call for supplies. The surface of the ground has been dressed with ashes and refuse lime. *Under this course of treatment I never had a pear tree attacked with any species of blight.* This may have been accidental.

In conclusion, I would say that, in common localities, no one should set out one pear tree more than he can annually cultivate with care, and can constantly supply, in some form, with the requisite food. A starved fruit tree is of no more profit than a starved animal.

Experience may, perhaps, demonstrate that the superphosphate of lime, manufactured under the superintendence of Prof. Mapes, of New York, is the cheapest and most convenient form of that element which can be employed. I have not yet tested its value.

A better taste should be developed among the fruit dealers and fruit purchasers in the markets of our cities. Some days since I sent into market several bushels of Beurré Van Marum—a *third* rate, but yellow and showy fruit—and of the Beurré Bosc—*the best of pears*, in my estimation, but of a rusty and unimposing exterior—both were fully ripe. To the good people of Cleveland we must allow the credit of being the best judges of fashion and business operations, but cannot honor their taste about fruits. The Beurré Van

Marum sold readily from two to three dollars per bushel; while the Beurré Boscs would not fetch any price. My agent returned them, and my family soon learned to appreciate their value.

East Rockport, Cuyahoga Co., Ohio, Sept. 30, 1853.

Though we dissent from some of the views of Dr. Kirtland advanced in the above article, it is, nevertheless, a valuable contribution to our fund of information upon the cultivation of the pear. We have never regarded the ash theory as of much importance, and we very much doubt if there is a soil from Cape Cod to the Mississippi which will not produce the best of pears by proper preparation and judicious manuring. And we make this remark that no one may be deterred from attempting to grow this delicious fruit, under the impression that his locality is deficient in the "phosphates."

What Dr. Kirtland says of the influence of climate on the pear, corresponds precisely with our article on that subject in our last number. "Contiguity to large bodies of water serves to temper the severity of the cold of winter, and prevents the scorching impressions of the sun in summer." And it is from this cause that the fine old pear trees flourish so well around Detroit, where they are not attacked with *blight*, rather than any peculiarity of soil, though it is undoubtedly a good one for the pear or any other tree.

"A starved fruit tree is of no more profit than a starved animal," is the conclusion the Doctor arrives at. It is a truth that he might have commenced with, and then proceeded to show that the principal cause of the failures in the cultivation of the pear has been that three quarters of the trees are starved to death. All the phosphates in the world won't save a tree starved or stunted in its youth. With the exception of the Western blight, nearly every disease of the pear may be traced to a stunted stock, or a starved nursery tree.

Art. IV. *Fresh Stable Manure for Pear Trees.* By H. G. Davis, Esq., Milford, Mass.

Dear Sir,—I wish to bring before the readers of your Journal the effect of fresh stable manure upon my pear trees, some of which were evidently dying.

They were encrusted with a substance resembling in external qualities soot, that kind that has a vitreous fracture. The limbs commenced dying at the extremities; some were dead up to the size of an inch and a half in diameter. The only wood made for several years, was from the leaves forming; the greater part of them had been planted fourteen years, and had never borne fruit.

In 1851 I removed the surface soil down to the roots, and supplied its place with well mixed compost that had been standing two years. To this was added wood ashes. This was done in June, but there was no favorable result. I ought to mention that wood ashes was applied freely in damp weather to the foliage. Late in the spring of 1852 manure was applied to the surface, and ashes to the foliage. This season the foliage appeared a little darker green, and one tree threw out a shoot three inches long, but quite small.

In March, 1853, I applied to the surface of the ground, just after a rain that partially removed the frost, but sufficiently to let the water percolate the earth, some six or eight inches of fresh stable manure, and let it remain until the grass began to start. This dressing extended as far as the roots. After its application we had two heavy snow storms. The result this year was a full crop of fruit, and a growth of wood in proportion, some shoots reaching twenty inches, and of a large size; a graft inserted in the spring grew five feet.

The hopeless condition of some of these trees should be considered to fully realize the change. This effect I attribute, not to the quality or quantity of manure, but to its early application. It will be noticed that it was before the tree began to take up its sap, or at least before any effect was visible. If I was to compare this mode of treating trees, it would be that of giving a man a generous breakfast to perform his day's work upon, while the summer or fall dressings may resemble the supper to the exhausted laborer, in both cases allowing food but once a day.

These trees came into my possession in this state, so that their previous history is unknown to me. I could wish that nurserymen would give this plan a trial and state the result. More familiar with the physiology of plants, I think they will readily give a good reason for such results.

My greenhouse, that I gave you an account of last year, continues to answer my highest expectations, and is worthy the attention of florists.

As the economy of my greenhouse rather surprised you, I will mention another economical arrangement. I have hot-bed frames made to fit the outside windows to my house. Four of them are eleven feet long each, and wide in proportion. These four give me a large bed. The other four are the same width, but not so long. The frames are made with rafters, upon which the sashes slide up and down; the rafters are two-inch plank, with a cap over the joint. I fill these beds in the fall with leaves and straw, so that the ground does not freeze. When it is thrown out I heap it up and let it decay for vegetable mould. I mention this arrangement to show how easy and economically a man may have early vegetables for his family. Of many things he can get the second crop.

Millbury, February 23, 1854.

Art. IV. *Pomological Gossip.*

The Lawton, or New Rochelle Blackberry.—Many of our readers have undoubtedly heard of the New Rochelle Blackberry, a variety found growing wild at New Rochelle, N. Y., and cultivated to considerable extent by Mr. Lawton of that place, who introduced it to notice. It has attracted considerable attention among the cultivators around New

York, and specimens of the fruit were exhibited last year on the 2d of August, at one of the meetings of the Farmers' Club of the American Institute, when Mr. Lawton gave the following account of it:—

"This blackberry—to which I have before called the attention of the club—has been cultivated in small quantities, for several years, in New Rochelle, Westchester County, where I now reside. I have not been able to ascertain who first discovered the plant and brought it into garden culture, but am informed it was found on the road side, and from thence introduced into the neighboring gardens. As it came to me without any name to distinguish it from the 'Wild Bramble,' I beg leave to introduce it to the notice of the club as the 'New Rochelle Blackberry,' and, at the same time, present as a specimen a few quarts of the fruit, gathered this morning, precisely as they came from the bushes, without being selected. I have examined many works with a view to ascertain if there has ever been any improvement on the well known wild varieties, but without success. The 'Double Flowering,' 'Dwarf,' or 'Dewberry,' 'American Upright,' and the 'White Fruited,' are all that are named. The Dewberry is the first to ripen, and the best flavored fruit. The White Fruited seems to be cultivated as a novelty more than for the fruit. The Upright variety fruits late in the season, is of vigorous growth, and under favorable circumstances produces large mulberry-shaped berries, but the seeds are not thickly imbedded in the pulp, and are so abundant as to impair materially the quality of the fruit. The blackberry seems to adhere to its original character with singular tenacity; or, from the many millions of plants which spring up from seeds annually distributed in almost every diversity of climate and soil, we should constantly find new varieties. Improving the wild plant by careful cultivation is one thing; to produce a new variety is another. The fruit now before you I believe to be of the last named character. It is not like the Dewberry, or long and mulberry-shaped like the 'Upright Blackberry,' and the seeds are so completely imbedded in a rich pulp as hardly to be noticed. I think in shape and size they compare very well with the Hovey Seedling strawberry.

"The 'New Rochelle Blackberry' sends up annually large and vigorous upright shoots with lateral branches, all of which, under common cultivation, will be crowded with fine fruit, a portion of which ripens daily in moist seasons for six weeks, commencing about the middle of July. They are perfectly hardy, always thrifty and productive, and I have not found them liable to blight or injury by insects."

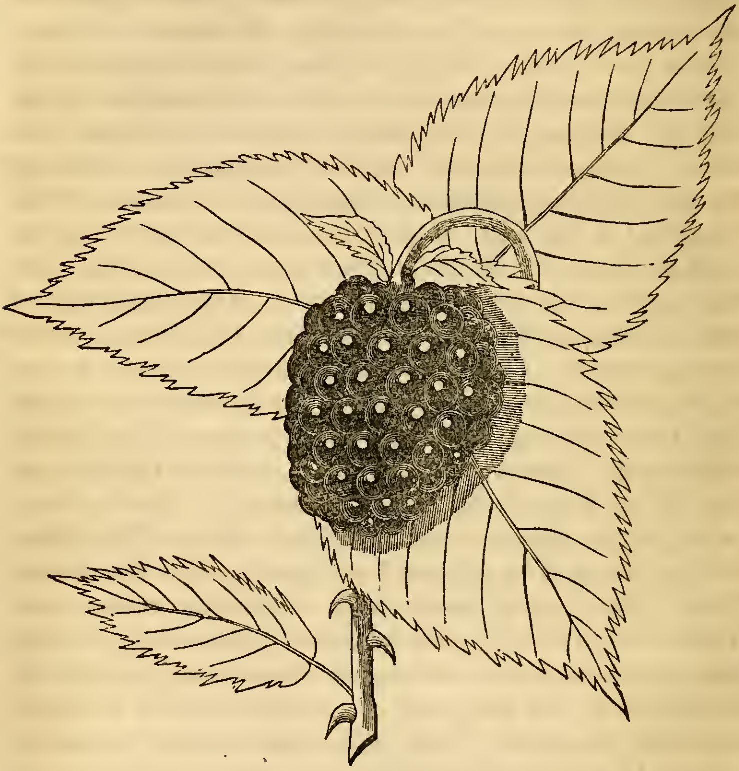


Fig. 11. *The Lawton Blackberry.*

The annexed engraving *(fig.* 11,*)* represents this new variety, which appears to be quite unlike the improved High Bush blackberry cultivated around Boston, and which Mr. Lawton probably alludes to under the name of the "American

Upright." It will undoubtedly prove a valuable acquisition to this long neglected but valuable fruit.

Mr. Lawton, in his account of this new variety, states that he has "examined many works with a view to ascertain if there has ever been any improvement on the well known wild varieties, but without success." If Mr. Lawton had looked over our Magazine, he would have found the information he so much wanted without the least trouble.

The Improved High Bush blackberry, as its name indicates, is a distinct and superior variety of the common "American Upright" species, which originated in precisely the same way as the Lawton blackberry. It was found growing wild in Dorchester, Mass., where its very large and abundant fruit attracted the attention of a cultivator, who took pains to cultivate it and bring it into notice. Capt. Lovett, of Beverly, has given its history in our Magazine, (Vol. XVI, p. 261;) and in a subsequent volume, (XVII, p. 21,) a further notice of it appeared, with an engraving of the fruit.

The common wild blackberry, as Capt. Lovett has shown, cannot be cultivated with any success. For five years he annually went into the "woods of Beverly, Wenham, and Manchester, in the county of Essex, Mass., marked the vines producing the largest fruit, and removed them to his garden. But in all cases made a signal failure in the production of any fruit worthy of garden culture, and in 1840 gave up all hope of ever being able to grow this berry successfully." We have quoted his own words; and it was not until he heard of the Dorchester Seedling, and procured the vines, that he was enabled to produce fine fruit. The native species appear to be partially sterile, only a few berries setting well, the others being imperfect; while every flower of the improved variety is followed by a large and splendid fruit, one and a half inches long, and in such profusion as to literally cover the bush.

We make this statement to correct the generally prevalent notion, that it is only necessary to transplant our common wild blackberry vines to the garden, to raise an abundance of the finest fruit. The Improved High Bush is a distinct variety, and the only one, except the Lawton, worth cultivation.

Mr. Lawton called it the New Rochelle Blackberry, but the New York Farmers' Club, in compliment to him, changed the name to the "Lawton Blackberry."

General Hand Plum.—We notice this new variety has come up again for discussion relative to its introduction, and to whom the merit belongs of bringing it before the public. We believe the first descriptive account of it appeared in our Magazine for 1846, (Vol. XII, p. 248.) We found it cultivated and for sale by Messrs. Sinclair & Corse of Baltimore, who stated to us that it originated in Maryland. It has since been stated to have originated in Lancaster, Pa., where its merits were made known by E. W. Carpenter of that place. Mr. Downing described it in the *Horticulturist* for 1851, and there copied our statement above alluded to, that it had been sent out by Messrs. Sinclair & Corse. We think we can claim the honor, if any there be, in first describing and introducing it to public notice, unless this was done previous to 1846.

The King Apple.—This is the name of a new variety, introduced to notice by Mr. James M. Mattison, of Tompkinsville, Western New York. Mr. Mattison has forwarded us specimens of the fruit, and we shall give a full account of it, with an outline engraving, in a future number. It is a very superior variety, somewhat resembling, in general appearance, the Hubbardston Nonsuch, but even larger than that fine variety, and keeping till February. It is well worthy of very extensive cultivation.

Black Barbarossa Grape.—This is the name of a new variety, which is attracting much attention among the English grape-growers. It is stated to be one of the finest late keeping grapes cultivated. It is described as "a very strong grower, wood very dark red, long jointed; eyes large and bold; leaves large, glossy, coarsely serrated, with long footstalks, changing early in the autumn to a most beautiful marbled red; bunches very large and long, well shouldered; berries large, roundish oblong, and, when well colored, very black, with a fine bloom;

skin, thin, tough, not liable to crack like many thin-skinned grapes: flesh, juicy, rich, and high flavored." It has been preserved on the vines at Welcombe, where it was introduced from Italy, fresh and good till March. At the last October meeting of the London Horticultural Society, Mr. Butcher, nurseryman, Stratford-on-Avon, received a Banksian medal for a bunch of the Black Barbarossa, weighing *three pounds, nine ounces.* We have grown this vine the last year, and it appears quite distinct from any variety in our collection of sixty kinds.

McAvoy's Superior Strawberry.—Last summer we gave some account of this new strawberry, (Vol. XIX, p. 400,) from specimens which were grown on our own vines. Mr. R. G. Pardee of New York, after reading our description, stated that we could not have the true kind, as numerous spurious sorts had been sent out for it, and ours was probably one of the errors. Our berries, however, corresponded exactly with the Ohio description of it, and we felt assured we had the *genuine* sort. Subsequently a colored plate of what purported to be McAvoy's Superior appeared in the *Horticulturist;* it was so entirely unlike ours that our faith was a little shaken; but recollecting that, according to Mr. Pardee, *nineteen-twentieths* of all sent out were errors, we thought Mr. Barry's plants as likely to be one of them as ours. In the January number of Dr. Warder's *Horticultural Review*, recommencing a new volume, another colored engraving of the McAvoy's Superior appeared, and this set all matters to rights; Dr. Warder speaks by authority of the Cincinnatians, where this variety is such a favorite, and it proves to be *precisely like ours.* There is no mistake in this; a peculiarity that Dr. Warder mentions as belonging to it is the "coarse segments of the calyx," which clasp the fruit, and which no one could mistake. Mr. Barry, however, is surprised that the Doctor should promulgate "such an error among his western friends," as several of the best informed gentlemen of Cincinnati, including Mr. McAvoy himself, have pronounced "his portrait correct;" and he even goes so far as to tell the Doctor, "no person of ordinary intelligence" would confound the two. Dr. Warder is, however, able to defend himself in this matter, and does not need our aid. We are only afraid, that out of fear of the consequences, he will at once own up that he is wrong. If he had our enviable reputation for firmness, so highly complimented by Mr. Barry, we should have no doubt as to the final result of the question. Will the Doctor dare tell us who is right?

THE STRAWBERRY QUESTION.—We had long supposed that the vexed question of the fixed character of pistillate varieties of strawberries had been settled—not again, at least soon, to occupy attention. A good share of room has been devoted to it in our pages, and a long series of experiments was conducted by ourselves to arrive at certain conclusions. While these experiments were in course of trial, we were led to waver somewhat in our opinion, by the array of what appeared to be conclusive facts, brought forward by our most intelligent correspondents against the fixed character of our own seedling, the variety experimented upon, and for our deference to the opinions of these cultivators, before satisfying ourselves by trial, the Rev. H. W. Beecher, then resident in the West, and editor of an Indiana paper, undertook to show our inconsistency in the matter, and even made the erroneous statement that we never published the results of our experiments. What motive he had for doing this was never known to us, unless it was a defence of the opinions of cultivators of the West against those of the East. Mr. Downing was delighted with Mr. Beecher's paper, and was only surprised that he should have said so much about "Mr. Hovey, who was only known to the public as the originator of a large strawberry"!

But notwithstanding Mr. Downing's praise of Mr. Beecher's article, and his acquiescence in his views, which were precisely the same as those we arrived at, viz., that pistillate varieties NEVER CHANGE, Mr. Downing, four years afterwards, sent twelve plants of Hovey's Seedling to the Massachusetts Horticultural Society, to prove that this variety would become staminate by cultivation. These plants were pronounced by the committee, and all who saw them, to be *spurious*, and thus ended the farce. We are not aware that Mr. Downing ever wrote another word upon the subject, nor do we recollect that he ever acknowledged or retracted his error!

The last year the whole question has been argued over again, only on more remote ground, in Pennsylvania—Mr. Meehan, gardener to C. Cope, Esq., Dr. Darlington, W. R. Prince, and the editor of the Philadelphia *Florist*, being the writers. It has resulted precisely as we supposed; a report upon the subject has been made to the Pennsylvania Horticultural Society, which will be found in another page of this number, and which we hope every cultivator will read. It will be seen that the plants upon which Mr. Meehan based his opinion, are declared "most emphatically, unreservedly, and unequivocally, NOT to be Hovey's Seedling." Thus all that has been written by the above parties, undertaking, with the exception of Mr. Prince, to demolish the truth of the unchangeable character of pistillate varieties, has been deduced from a series of gross and unwarrantable errors. We dismiss the subject.

ART. VI. *Seasonable Hints on Pruning.*

By THE EDITOR.

As the season is now at hand when the greater part of the pruning is to be performed, we have thought a few brief remarks not unimportant, especially for those to whom the operation is not a familiar one. We are well aware that almost every cultivator imagines he fully understands the art of pruning, which is nothing more than giving the tree a comely shape, cutting out its cross-branches, &c. We shall not deny that any one who has an eye for symmetry of form, may, with very little knowledge of the growth of trees, prune to a certain extent very satisfactorily; yet, even those who are enabled to do so merely as regards form alone, should remember there are minute details, which only he who has studied the art long and attentively can become acquainted with, and which are necessary to render the operation complete.

It is not our object now to enter into a discussion of the principles of pruning; or to take it up in all its varieties; but simply to give a few hints in regard to those little details that are generally overlooked, especially by the inexperienced, and which may be termed the mechanical execution of pruning, essential, however, to the growth, vigor, and general beauty of trees.

Pruning, as we have before observed, is often performed by those who have had but little experience in the art. As generally understood it consists in cutting out the cross branches, taking away those where too crowded, shortening the new wood about half its length, and occasionally heading in an older branch, to obtain a comely or symmetrical shape. So far this is all very well.

But examine closely some of those trees whose general appearance is thus neat and handsome; it will soon be found that they are far from being perfect specimens of systematic pruning. In their outline they may be regular, but in the detail they will be found wanting; throughout the tree will be seen bits of dead wood at the ends of each year's pruning, and occasionally spurs or shoots of an inch or more in length. The curves of the branches will often be in the wrong direction, and shoots bare of fruit spurs for a foot or more in length common. These all result from want of attention to those little details which are so familiar to the experienced practical man. To know *how* to cut is as important as to know *where* to cut.

To illustrate the errors which produce the first of the above results we have given the annexed engraving, *(fig.* 12.*)*

These figures represent the ordinary mode of cutting off branches (*b c d*) as well as the proper manner (*a*) of performing the operation. In *b* the angle is in the wrong direction, and allows the rain, which falls upon the surface of the cut, to penetrate to the bud, which often destroys it; or, if not thus destroyed, its vitality and vigor is greatly injured by the deprivation of the bark in such near proximity. In *c* and *d* the cuts are made too far from the joint, leaving an unsightly piece of wood which dies down to the bud, generally during the first season, and which renders it necessary to be pruned off carefully to make good work. One half of the trees that undergo the operation of pruning are cut in one or the other of these modes. Now the correct plan is to prune as shown in *a*, making the cut at an angle of forty-five degrees, commencing at the back of the bud and coming out just above it, say the *sixteenth* of an inch; this will preserve it from atmospheric dryness, while the water will be carried off to the opposite side of the branch. A slight inspection of these objectionable modes (*b c d*) will enable any one to guard against similar errors.

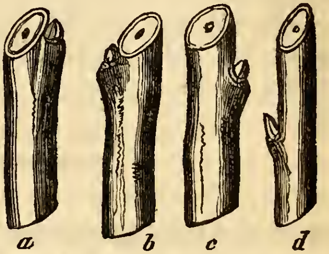


Fig. 12. Various Modes of Pruning.

Having thus shown how the work should be done, we may advert to another error, too frequent in pruning trees; that is, cutting off at a side or inner bud, thus giving the new shoot a wrong direction. The buds of the pear tree grow in a spiral form, that is, every five buds usually complete a spiral round a branch, every fifth, tenth, fifteenth one, &c., being on the same side, in a vertical line. Now in pruning, unless it is necessary to secure a shoot to fill some vacancy, the cut should be made at an *outside* bud: this will give a graceful and uniform curve to all the branches. But if, on the contrary, no regard is paid to cutting, only in reference to the length of the shoot, some will be inner, some outer, and some side buds; and just as this happens will the direction of the branch be given, tending in the end to confusion and irregularity. Leading shoots, when headed in, should be cut to buds on *opposite* sides, every successive year, otherwise they will not grow in a straight line. We have seen trees, otherwise very well shaped, thrown out of the perpendicular, by heading in the main shoot to buds on the same side for three or four successive years.

With the introduction of so many dwarf trees into general cultivation, pruned in the pyramidal form, it is very important that these hints should be attended to; otherwise the gardens of our amateurs will present a display of anything but symmetrical and handsome specimens.

Fall or spring pruning should *always* be done with the *knife;* but summer pruning may be performed with the pruning shears.

Art. VII. *Floricultural and Botanical Notices of New and Beautiful Plants, figured in Foreign Periodicals; with descriptions of those introduced to, or originated in, American Collections.*

Botanical Expedition to California.—Since the appearance of our article, and the letter of our correspondent R. S. F. in our February number, urging the importance and propriety of sending a collector to California to procure the fine hardy trees and shrubs of that region, several friends have promised us their most cordial support and aid in such an enterprise. Of this we had but little doubt at first; the failure of the plan, if failure there was to be, we were afraid would result from our inability to find a suitable person to act as collector. But we are happy to state that this difficulty has already been removed, as our correspondent, Mr. Wilson Flagg, has offered his services to the subscribers, and a better person we are sure could not be found. Ardently imbued with a love of trees and natural scenery, a botanist and ready writer, he will not only be enabled to search out everything worth procuring, but give us such descriptive accounts of the rich vegetation of California as would doubly enhance the value of his acquisitions. It is with much pleasure that we make this announcement, and trust it will at once give assurance to our friends of the success of the expedition, which now only awaits the filling up of the subscription list to a liberal amount. We invite all who have any interest in the subject to send us their names.

THE RED WOOD, OR GIANT TAXODIUM OF CALIFORNIA.—Mr. Lobb, the collector of Messrs. Veitch & Co. of Exeter, England, who is now in California, has sent home seeds of the Giant Taxodium, with a description of the tree, which Dr. Lindley notices in the *Gardener's Chronicle*, and suggests the pompous name of Wellington*ia* gìgantea, believing it to be botanically distinct from Taxòdium. Whether it is or not remains yet to be decided, but if it may prove distinct, we trust that every American, at least in this case, will repudiate the name! Mr. Lobb was not the first to discover this tree: in a letter, now before us, and which we shall allude to hereafter, Mr. W. R. Prince states that he and other Americans discovered it at the head of the Stanislaus, in June, 1849, and believing it to be a true Tàxodium, as he still thinks it is, only a different species, it did not attract any particular attention, only from the uncommon size of the specimens. In our note to Mr. Prince requesting some information in regard to the tree, we suggested if it was a distinct genus that it should be named after the beloved Father of our own country, and we now publicly suggest it again. Let Dr. Torrey or Dr. Gray give it a critical botanical examination, and if not a Taxodium, let this giant of our American forests be called WASHINGTONIA—in honor of one who, above all others, deserves the homage of this and every people.

ABIES BRACTEATA.—This superb new Fir, which we described at p. 69, is advertised for sale by Messrs. Veitch of London, at 63 *shillings sterling each;* seedlings only one year old, in pots. This shows the value of new Evergreen trees to English cultivators, who spare no expense to introduce them; both this and the Giant Taxodium will be in great demand in England for some years, and our nurserymen would find it to their advantage to procure the seeds, raise the plants, and send them abroad for sale.

REVIEW.

ART. I. *The American Hand Book of Ornamental Trees.*— By THOS. MEEHAN, Gardener. 1 Vol. 12mo. pp. 257. Philadelphia: 1853.

THIS small and unpretending book of Mr. Meehan's has been some time before the public, and our notice of it is later than its merits deserve. But want of space has prevented us from attending to it sooner.

Mr. Meehan is generally known as the gardener of Mr. Cope, at Springbrook, near Philadelphia, and as the successful cultivator of the first plant of the Victòri*a* règia, which flowered, in America, at that place. He is now, however, gardening on his own account, having established himself at Germantown, in company with our excellent correspondent, Mr. W. Saunders, whose practical papers have given so much information to our readers.

"A small work," says Mr. Meehan, in his prefatory remarks, "on the hardy ornamental trees in cultivation, has long been a desideratum," a truth which all will admit, especially at this time, when attention is turned to the embellishment of our village and suburban residences, more than at any previous period. It fills a blank very much desired; giving, as it does, plain, practical, straight forward directions for transplanting trees, and a list of the most desirable sorts, without going over a great space, and introducing matter quite unnecessary for the wants of a large class of our rural population.

Fifty pages, divided into the same number of paragraphs, treat upon the proper soil—choice of trees—best size for transplanting—season to plant—pruning—transplanting—selection of kinds, &c.

We would be glad to quote several paragraphs, had we room, but we content ourselves with the following in reference to pruning, because it accords so exactly with our views, and is so directly at variance with the popular opinion:—

Pruning.—Is it necessary to cut back the branches of a tree in transplanting? As much so as it may be necessary to cut off a man's limb to save his life. In either case it is a necessity upon which the operator might well ponder and hesitate to act.

If fall planting be adopted, the elaborated sap contained in every branch, will assist in the formation of roots. As there is little or no evaporation from the tree in the winter season, the branches can do no harm any way; and by the spring the tree will have made roots to serve them.

In spring planting also, if the roots have an abundance of fibres, cut nothing away; they can support all. If otherwise, pruning must be resorted to, or the sap will be dried out of them before the tree can raise a necessary supply.

The whole question is reduced to one of evaporation. If there be fibres enough to sustain evaporation, the less cut the better.—pp. 38, 39.

The remaining 200 pages are devoted to a list of the best trees, with brief descriptions of each. Some few are omitted which ought not to have been, and a few are named which will not do well in the latitude of 42° N.: but with this exception the work is a handy guide to all who are planting or ornamenting their grounds with fine trees.

MISCELLANEOUS INTELLIGENCE.

Art. I. *General Notices.*

Culture of the Fuchsia.—This useful plant is, I fear, seldom employed now for decorating the greenhouse and conservatory, and therefore its cultivation has of late years been unfortunately much neglected; for in one place where you will find a well grown specimen, in twenty you will get them more like broom bushes than properly managed plants. I therefore beg to offer a few remarks on the mode of culture which I pursue. I start my early vinery about the 1st of January at 45° Fahr., and I place a few of my best ripened Fuchsias in it, choosing the oldest of my plants for the purpose. I syringe them over-head morning and evening with tepid water, which I also apply to the vines. Under this treatment, in the course of a fortnight or so they begin to show symptoms of growth; I then raise my house to 50°, after which they push vigorously. I now take cuttings off all I can, and, having a bed made previously for their reception, I insert them in a compost of leaf-mould and silver sand, taking care to drain the pots well. I also put about half an inch of white sand on the top of the pot; this keeps the soil open round the neck of the cutting, and prevents damping off, which Fuchsia cuttings are apt to do at this season in mould alone. Supposing my cuttings to be struck now, I pot them off singly into 3-inch pots, in a mixture of leaf-mould, a little well-decomposed cow-dung and some sand, watering them sparingly. I then place them in a slight bottom-heat, where they soon make a start, and if all goes on well they will soon be six inches high, when I shift them into a 5-inch pot in a compost of rich turfy loam, rotten cow-dung, a little leaf-mould, and sand. I now bring them to the vinery, keeping them close up to the glass; they now reap the benefit of their shift, and become strong and vigorous, throwing out laterals or side shoots in abundance. About this stage I apply a small stake, to which I tie the leader very loosely. The side shoots now make rapid progress, and when they have attained the length of two or three joints, I pinch off one, leaving one or two, according to the length of the joints. In this way I double my side shoots. I now give a little weak liquid manure, made of sheeps' dung, if that can be got; I give them this twice a week, which invigorates them, and makes them push fresh laterals, which I again pinch, tying the leader to the stake as it grows. By this time the pot will be pretty well filled with roots. I now give them their final shift for the season, using a 10-inch pot, and good rough compost, consisting of turfy loam and cow-dung, in equal parts, mixed with a little leaf-mould. By the beginning of August I have got pretty tolerable plants; I therefore let them come into bloom, watering liberally with manure water, and putting a slight mulching of cow-dung on the top of the pots. They will flower till the end of October, or middle of November. I now have the foundation laid for specimen plants the following season. After they have done flowering, I store them in an empty pit, giving only as much water as will keep them alive till spring. Next year they get the same treatment as last, and by these means I succeed in getting plants which are the admiration of all who see them.—(*Gard. Chron.*, 1854, p. 55.)

Single Chinese Primula.—Fine blooming plants of this Primrose, that will continue in flower through the whole of the winter months, may be produced as follows:—In order to obtain strong plants, the seed should be sown not later than the first of May, in a well drained store pan, in a light sandy soil, and put into a cool frame, as near the glass as possible. When large enough to be pricked off into store pans the young seedlings should be allowed a square inch between each plant; when that space has been filled, let them be potted singly into 3-inch pots, and as the pots become filled with roots, shift into a size larger pot, giving them their final shift into 6-inch pots in the early part of September. The compost in which I have found these plants to thrive best has been equal parts turfy loam and leaf-mould, and a little sharp sand. While growing, a cool pit or frame suits them best; give plenty of air, and be careful not to overwater them. Treated in this way the plants will be in flower by the middle of November, and will continue in blossom through the whole of winter, and to be seen to advantage they should be moved to the greenhouse or conservatory.—(*Ib.*, p. 808.)

Art. II. *Domestic Notices.*

Native Grapes.—The native grapes of this country possess one valuable peculiarity, viz.: they are easily acclimated throughout the whole extent of our territory—in other words, they may be grown successfully, with very little care in the management, from one extreme of the continent to the other. A very erroneous impression appears to have obtained popularity in some sections, concerning the distinctive or distinguished characteristic of our native grapes. We allude to the remark we often hear that all indigenous grapes are distinguished by a brownish or purple color; whereas a majority of them—particularly the finer and more valuable varieties, are white. The banks of the Pawtuckaw, a branch of the Lamphrey river, are literally covered with the vines of the native grape. So abundant, indeed, is this production in that locality, that it is said by those who have visited it, you may, in the space of two or three miles, meet with twenty different varieties, all of which have originated from seeds. In many parts of Maine, and especially in the vicinity of Lake Sebago, and on the islands of the beautiful but rapid Presumpscott, its only outlet, there is an abundance of native vines, some of which produce purple fruit, and are of gigantic size. Others produce the small "Fox grape," and a third variety, a large oblong white fruit, of beautiful appearance and most delicious flavor. All these grapes are remarkably hardy, and easy of cultivation, and when transplanted into suitable soil, and properly pruned and managed, are invariably productive of superior fruit. We have seen vines from the shores of this lake, growing luxuriantly in Massachusetts; and others taken from the same locality, are represented as being very hard, and producing liberally, at Utica, N. Y.

The grapes of Ohio are acquiring a world-wide celebrity—not so much, perhaps, in consequence of any distinguishing or strikingly peculiar excellence pertaining to them, as from the novelty of their origin; it having generally been supposed that however much America might outstrip the rest of the world in her cotton, tobacco, and sugar staples, the cultivation of the grape and the manufacture of wine were branches of industry wholly beyond her power. But the day is not distant when the vast sums spent for the "juice of the grape"—most of which go to enrich other and hitherto more favored lands, will be diverted from the accustomed channels of commerce, and monopolised, either wholly or in great part, by our own population.

Many years will not transpire ere the hills of far off Maine will be trellised with vineyards, and the wine-press be as common an appendage to the homestead of her enterprising husbandmen, as are now the cider-mill and the cider-press. Her soil is admirably adapted to the cultivation of the grape—particularly the native varieties, and experience has already demonstrated that from these there may be made a wine equal, if not superior, to the best imported article. Other states will precede her in this enterprise, but she will follow at no great distance, and with zeal.—(*Germantown Telegraph.*)

The above article has been going the rounds of such papers as devote a column to agriculture occasionally.

Now if such grapes really do exist in Maine, as stated, how is it, that you, Messrs. Editors, who, it is well known, have been ransacking the "old world and new," for all manner of plants and fruits, have not long since discovered these valuable native grapes? If the banks of the Pawtuckaw, a branch of the Lamphrey river, are literally covered with the vines of native grapes, "so abundant that you may in the space of two or three miles, meet with twenty different varieties!" or, that "on the islands of the Presumpscott, there are vines producing purple fruit, others produce a small Fox grape, and a third variety, a *large oblong white fruit*, of beautiful appearance, and most delicious flavor;"—if this is true, we hope some persons in the vicinity will give pomologists an inkling of their qualities, and introduce them into cultivation.

I myself would be under great obligations to any person who would send me a few cuttings "by express," particularly the *large oblong white grape* noticed above.—J. B. Garber, *Columbia, Lancaster County, Pa., December* 30, 1853.

Heating Greenhouses by Hot Air.—The winter has been quite mild with us. We have had no snow, and this was the case last year. The thermometer has been down to zero twice, and the weather has been cold enough to allow us to fill our ice-houses. I do not recollect if I mentioned having erected a new greenhouse at my town residence, and that it is heated by a hot-air furnace in the cellar—the hot air being conveyed into flues under the pavements, and, when more than the heat radiated from the flues is necessary, it is allowed to enter the house through registers in the flues. Thus far, the plan has answered perfectly. Without any covering on the span-roof, and with merely shutters on the sides and end, made of half-inch plank, we could preserve a temperature of 50° inside, while the thermometer stood at zero outside, and could have made it hotter had we desired it. There is, in the centre of the greenhouse, a fountain rising from a basin eight feet in diameter, and filling the atmosphere with moisture. The health of the plants has been well preserved. The house is 42 by 20, and to the apex of the roof 18 feet. There is a border two feet wide along the front on the inside, the glass reaching to the ground. The roof is of French glass, and is frosted on the inside, to subdue the intensity of the light. An arch is thrown over the fountain, and a trellis of wire worked over the iron frame. On this climbers will run, planted in boxes on each side the fountain; while some orchideous plants are suspended beneath the arch—one of them, a Zygopetalon Mackayi, being now finely in bloom. In the border various fine plants are growing, and it is edged with hyacinths on one side and crocuses on the other. Some of the hyacinths have now flower-stems more than a foot high, and the air is filled with their perfume. Should you come westward again, I shall hope to receive a visit from you.—*Respectfully yours*, P. S. Fall, *Frankfort, Ky., February*, 1854.

Art. III. *Societies.*

ALBANY AND RENSSELAER HORTICULTURAL.

The annual meeting and winter exhibition of the Society took place at Albany, February 22, when the following officers were elected:—

President.—Herman Wendell, M. D.

Vice Presidents.—C. P. Williams, Amos Briggs.

Secretary.—Joseph Warren.

Treasurer.—Luther Tucker.

Managers.—V. P. Douw, B. B. Kirtland, J. M. Lovett, L. Menand, E. Corning, Jr., W. O. Wharton, J. S. Goold, James Wilson, and A. F. Chatfield.

The following premiums were awarded:—

Plants in Pots.—Best display, to E. Sanders. Best ten plants, to L. Menand; best six, to Mrs. James Goold.

Camellias.—Best display, to J. Wilson; second best, to J. Dughale. Best three varieties, to E. Sanders.

GENESEE VALLEY HORTICULTURAL.

The annual meeting was held at Rochester on the 4th of February last, and the following officers elected:—

President.—H. P. Norton.

Vice Presidents.—Jno. Williams, Rochester; Selah Mathews, Brighton; R. Brown, Greece; H. Hooker, Irondequoit; Zera Burr, Perrinton; Saml. Shadbolt, Scottsville.

Corresponding Secretary.—H. E. Hooker.

Recording Secretary.—J. Vick, Jr.

Treasurer.—I. H. Watts.

Executive Committee.—H. P. Norton, P. Barry, Jos. Frost, H. N. Langworthy, J. Vick, Jr., Chester Dewey.

BUFFALO HORTICULTURAL.

The following are the officers and committees of the Buffalo Horticultural Society for the present year:—

President.—Amasa Mason.

Vice Presidents.—Col. J. R. Smith, Myron Stilwell.

Treasurer.—Hiram C. White.

Corresponding Secretary.—Jno. B. Eaton.

Recording Secretary.—Charles E. Clarke.

Committee on Fruits.—S. B. Allen, B. Hodge, S. Eaton.

Committee on Flowers.—J. R. Smith, John Westphal, A. J. Mathews.

Committee on Vegetables.—J. Saxton, J. Schenck, W. Granger.

Committee on Entomology.—W. R. Coppock, W. Lovering, Jr., J. D. G. Stevenson.—*Yours, truly,* Jno. B. Eaton, *Cor. Sec., Buffalo, Feb.*, 1854.

COLUMBUS HORTICULTURAL.

This Society held its annual meeting at Columbus, Ohio, March 10th, and elected the following officers:—

President.—Dr. I. G. Jones.

Vice Presidents.—Robt. Hume, M. B. Bateham.

Corresponding Secretary.—Henry C. Noble.

Recording Secretary.—H. B. Carrington.

Treasurer.—Joseph H. Riley.

Member of Garden Committee.—Robt. Hume.

Council.—Francis Stewart, John Miller, C. P. L. Butler.

PENNSYLVANIA HORTICULTURAL.

The meeting of the Society was held February 21, and the *Ad Interim* Report submitted. Some fruits were reported upon, but they were principally well known sorts.

Reading Pear.—Fine specimens of this native pear were presented from N. Lott, of Reading.

We give in detail the following upon the strawberry question, which we recommend to the perusal of all our readers:—

A Strawberry Plant in Pot—from Mr. Thomas Meehan.—This plant contained one ripe, perfect berry; size, large, nearly three and three-fourths inches in its horizontal circumference; form, roundish; color, brick-dust red, with brownish seed set in superficial indentations. Besides this ripe berry, it had on it four deformed and defective unripe ones, and eight abortive flowers. The anthers, that were still visible, shewed it to be a staminate variety; and by some of the Committee it was considered the Cushing. With this plant the following letter to the Committee was received on the 9th instant:—

"*To the Fruit Committee of the Pennsylvania Horticultural Society:*

"Gentlemen:—In seeking the name of the strawberry sent herewith, I beg to make a few remarks in connection. Last spring I exhibited before the Society three plants, as I believed of the same variety as this. One plant having all the flowers pistillate; another all hermaphrodite; the third having both pistillate and hermaphrodite. By direction of the Society my remarks sent with the plants were printed. Friends at a distance subsequently came forward, who expressed an opinion that my plants could not be 'Hovey's Seedling,' but must be some variety in which the power to vary in its sexual character was a 'characteristic' feature. I may be allowed to observe that if this variety be not Hovey's—a strawberry that bears abundantly, will produce fruit averaging from three to three and a half inches in circumference—not only in its natural season, but the first week in February, and hermaphrodite in its sexual character, is at least equal to Hovey's. The history of this kind, so far as my knowledge is concerned, is as follows: When I took charge of this establishment, in 1852, a large plantation of strawberries had been made the preceding fall, and which were given up to me as a new bed of Hovey's Seedlings. The plants being set eighteen inches apart, afforded good opportunity for observation. On their first flowering every one that flowered up to a certain date, comprising nearly the whole of them, bore pistillate blossoms. There being no others on the place, and being at that time myself a firm believer in the 'unchanging' theory, I mentioned to my esteemed employer the 'fix' we were in, and suggested the propriety of procuring at once some staminate varieties. A week or so afterwards, he being at Springbrook, we examined the bed together, when little else but hermaphrodites were to be found. This suggested to me the experiments you are already advised of. The plant from which this fruit was obtained was from a plant marked while in flower last spring. It is a very weak plant, as you will perceive by its inability to bring to perfection, at this early season of the year, the other very few flowers that opened, and that it was hermaphrodite you will readily perceive by the dead stamens at the base of the fruit. In its natural season of fruiting the color is deep crimson. Very respectfully, Thomas Meehan."

Mr. Meehan is well known as one of our most estimable, intelligent, and scientific cultivators. His honesty and integrity, we are fully convinced, would not suffer him to advance an opinion the soundness of which he did not most conscientiously believe. And by all who know him it is freely admitted that his views on horticultural subjects are remarkably correct. Entertaining, as we do, these opinions of Mr. Meehan, we regretted the appearance of his communication to the Society, on the 17th of March, 1853, respecting the changeable sexual character of Hovey's Seedling strawberry. Being persuaded that he had been led, unintentionally, into error, we were unwilling to take any action, officially or individually, in regard to his communication, under a conviction that his acknowledged discernment, honesty, and intelligence would eventually enable him to discover the unsoundness of his experiments, and cause him unhesitatingly to repudiate them. His letter has, however, now brought the matter fully before us, in such a way that we are no longer at liberty to decline its investigation. In the paper read before the Society, and referred to in his letter to the Committee, he broadly asserts that Hovey's Seedling may be made staminate or pistillate, at pleasure, by cultivation. In proof of this assertion, he exhibited three plants, each in a separate pot—one having none but pistillate blossoms; the second none but hermaphrodite blossoms: the third containing blossoms some of which were pistillate and the others hermaphrodite; and these several sexual differences he attributed entirely to cultivation. Now, if each one of these three plants was a genuine Hovey's Seedling, Mr. Meehan has most unquestionably and conclusively established the truth of the doctrine for which he contends. The vital question to be solved is, was each of these plants a genuine Hovey's Seedling? This point we will now examine. In the communication to the Society no evidence of their genuineness is presented, apart from the simple statement that they were Hovey's Seedling. On this point, however, the letter to the Committee does not leave us so much in the dark. So far, however, from establishing their genuineness, it furnishes strong grounds for a contrary belief. For in it Mr. Meehan gives us their history in the following words: "When I took charge of this establishment, (Springbrook,) in 1852, a large plantation of strawberries had been made the preceding fall, and which were given up to me as a new bed of Hovey's Seedling." Subsequently, in speaking of the plants in this bed, he emphatically assures us "there were no others on the place." This bed then was the source whence Mr. Meehan obtained the plants with which he experimented. And the only evidence he had that they were Hovey's Seedling was that they were given up to him as such. In this stage of the investigation it is of some consequence to know whether this bed was made by a person in whose honesty and accuracy implicit confidence could be reposed. It is known that Thomas Ryan's successor, and Mr. Meehan's immediate predecessor, was gardener to Mr. Cope in the fall of 1851, when the above-mentioned bed was set out; but we question whether Mr. Cope or Mr. Meehan will say that he was entitled to such confidence. It is a matter of record that there were a number of varieties at Springbrook the year before. On referring to the proceedings of our Society for March, 1850, it will be seen that Ben. Daniels exhibited a "bed" containing the following six varieties of strawberries, viz.: Hovey's Seedling, British Queen, Buist's Early May, Keen's Seedling, Sciota, and Cushing. At that meeting the proceedings also show that the Fruit Committee awarded "a special premium of ten dollars to Ben. Daniels, gardener to C. Cope, for the magnificent display of strawberries, embracing several foreign and native varieties." It is barely possible that all these plants, embracing six varieties, were in some way or other lost; but is it probable that such was the case? Is it not far more probable, as they formed so attractive a feature at the March meeting, and excited at the time such universal admiration, that they were not only retained, but that they had increased in numbers; and that some of them were used in making the "new bed of Hovey's Seedling" in the fall of 1851. For we have the positive assurance of Mr. Meehan that there were no strawberries at Springbrook when he took charge of it in 1852, except those contained in the bed whence he took the plants with which his experiments were conducted. But even admitting that this bed was made entirely from a plantation which originally were undoubted Hovey's Seedling, it by no means follows that the bed contained none but genuine plants of this kind. For no bed, of any variety, can exist for two or three consecutive years in a bearing state without having its purity more or less impaired by accidental seedlings. Many of the seed, that necessarily fall to the ground, vegetate and produce plants—some of which will differ from their maternal parent in sexual organization, time of inflorescence, period of maturity, and in various other particulars. We have seen strawberry seed, that were planted in midsummer, produce plants that bore fruit the very next year. There is no certainty, therefore, that all the plants in a bed are of one kind, unless they are all produced by runners from a single plant.

In regard to the plants in the bed at Springbrook, Mr. Meehan says, in his letter to the Committee,—"On their first flowering every one that flowered up to a certain date, comprising nearly the whole of them, bore pistillate blossoms." * * * * * "A week or so afterwards, he (Mr. Cope) being at Springbrook, we examined the bed together, when little else but hermaphrodites were to be found." The question here arises,—how can this difference in the sexual character of the blossoms, at these two periods of time, separated by an interval of "a week or so," be accounted for, if it were not owing to the presence of more than one variety in the bed? It is certainly not explained by the adoption of Mr. Meehan's views; for if those views be correct, no such sexual diversity ought to have existed,—all the blossoms should have been pistillate or all staminate, as all were subjected to the same cultivation. Again, in allusion to the plant we received from him, he says in his letter to the Committee; "It is a very weak plant, as you will perceive," &c. Then, according to the doctrine developed in his communication to the Society, it ought to have produced pistillate blossoms; but it did not, they were all either hermaphrodite or staminate. The remarks now made, we think are sufficient to invalidate any inferences drawn from Mr. Meehan's experiments, since it has been shown there is no certainty that the plants employed in those experiments were genuine Hovey's Seedling. We regret that our regard for Mr. Meehan prevented us from examining the three plants when they were exhibited by him at the March meeting of the Society. Had that been done, the profitless discussion that has subsequently arisen, and which has resulted in no little unkind feeling, might perhaps have been obviated. But as we have now engaged in the investigation, we have subjected the plant sent to us by Mr. Meehan, to a careful and rigid examination to ascertain its genuineness. And, after having made this examination, we are prepared to say most emphatically, unreservedly, and unequivocally, it is not a Hovey's Seedling. Should Mr. Meehan still be unconvinced that his experiments were based on uncertain data, and consequently that any conclusions from them, however legitimately drawn, are illogical and unreliable, we trust he will repeat them in such a way as to avoid the sources of error to which his former ones are amenable. Let the plants, with which he may experiment, by all means, be runners taken from one and the same plant; we shall then have conclusive evidence that they are, at least, all one kind. And should he determine to continue his experiments in this direction, we would also advise him to obtain, if possible, runners from each of the three plants exhibited by him in March last, and subject some of the runners of each to his several modes of cultivation. The result will either substantiate his doctrine, or satisfactorily prove that these three plants were three separate and distinct varieties, possessing invariable, unchangeable and immutable sexual characteristics, unalterable by cultivation, however diversified by human sagacity. After the above was written, one of the Committee received a communication from Mr. Meehan, in which he informs us that the three plants exhibited by him at the meeting of the Society, in March, 1853, "were thrown away soon after the exhibition, I having no idea that there would ever be occasion to refer to them again." This loss we regret. We learn, however, from Mr. Cope, that he has 3 or 400 pots of plants, (taken it is to be hoped from the same "new bed of Hovey's Seedling,") in his forcing house at this time; "and," he remarks, in a letter to a member of the Committee, "however little dependence the Committee may feel disposed to place in the statements concerning the experiments in progress, yet the result will nevertheless be placed before them for their judgment." Should Mr. Meehan, in this large collection, be so fortunate as to find, (and if his theory be true he undoubtedly will,) three plants possessing the several distinctive sexual characteristics of the three he exhibited on the former occasion, we trust they will not be "thrown away," but be experimented with, by him, in the manner already suggested, or else placed in the hands of some other reliable person, for this purpose. In his communication to one of the Committee, Mr. Meehan also states explicitly, that the plant sent to us is not one of the three exhibited before the Society, but was from a plant that had borne hermaphrodite flowers. It appears, then, that it, at any rate, has not changed its sexual character, the blossoms having been hermaphrodite before, and are hermaphrodite now notwithstanding its present feebleness.

It is probably within the recollection of many of the members of the Society, that views somewhat analogous to those of Mr. Meehan were, at one time, maintained by the late Mr. Downing. He contended that the natural condition of Hovey's Seedling was staminate; but by permitting the old plants to bear for several successive years, their luxuriance was impaired, and their sexual character altered—in other words—they became pistillate. And to prove the correctness of his position, he announced his intention of sending to the Massachusetts Horticultural Society several of his plants in pots. After that announcement, as nothing more is found in the Horticulturist on the subject, it is probable that he abandoned the doctrine. Be this, however, as it may, we have been credibly informed that he did send the plants to Boston, and that the Fruit Committee of the Massachusetts Horticultural Society decided they were not Hovey's Seedling.—[See our Magazine for 1850, Vol. XVI, p. 8.—Ed.]

Art. IV. *Massachusetts Horticultural Society.*

Saturday, January 28, 1854.—Adjourned meeting,—the President in the chair.

The Publication Committee was requested to procure the publication of a Catalogue of the Library, in small pocket form, and that 1000 copies be printed for circulation among the members.

The Committee of Arrangements reported the 21st to the 28th days of September for holding the next Annual Exhibition, but the Report was amended, fixing the time on the 14th, 15th, 16th, and 18th to 22d September, inclusive.

A copy of the *Transactions* of the New York State Agricultural Society was received from the Corresponding Secretary, B. P. Johnson, Esq., and the thanks of the Society voted for the same.

A communication was received from N. Longworth, in relation to the strawberry. Laid on the table.

Adjourned one week, to January 28th.

February 4.—Adjourned meeting,—Vice President Richards in the chair.

There being no quorum the meeting adjourned to first Saturday in March.

March 4.—Adjourned meeting,—the President in the chair.

On motion of C. M. Hovey it was voted that the President, C. M. Hovey, French, Breck, Walker, King, and Wight, be a Committee to report what measures should be adopted in reference to the meeting of the American Pomological Convention in Boston, next autumn.

Mr. S. Walker reported that Mr. I. Babbitt did not accept of the proposal of the Society in reference to his grafting wax.

Adjourned one week, to March 11th.

March 10.—Adjourned meeting,—the President in the chair.

The Treasurer was authorized to settle with the publishers of the *Transactions*, if any funds remained in their hands.

The President and two Secretaries were chosen a Committee to consider the subject of admission fees at the weekly exhibitions, and report to the Society.

Adjourned one week, to March 17.

March 17.—Adjourned meeting,—the President in the chair.

The President, from the Committee appointed at a previous meeting, reported a series of resolutions in relation to the meeting of the American Pomological Society in Boston.

Messrs. C. M. Hovey, W. S. King, Dr. Wight, A. W. Stetson, and Thos. Page were chosen a Committee of Arrangements to carry the same into effect.

L. E. Beckmans, Plainfield, N. J., was chosen a corresponding member.

J. Vick, Jr., Rochester, N. Y., presented a copy of the *Horticulturist* for 1853, and the thanks of the Society were voted for the same.

Dissolved.

HORTICULTURAL OPERATIONS

FOR APRIL.

FRUIT DEPARTMENT.

March has been a very variable month. The early part was mild and pleasant, with warm rains, which nearly cleared the ground of frost; but the latter part has been unusually cold and blustering, with snow, and the thermometer as low as 10° on the 21st. The ground again froze up on the surface, and at the time we write it is yet too cold to admit of out-door operations to any extent, except pruning, grafting, &c.

GRAPE VINES, in the first houses, will now begin to color their fruit; or perhaps in those a little later will now have arrived at a good size, and will begin to color next month. Take advantage of warm and genial weather to give as much air as possible, without chilling the house, and do not keep up too high a night temperature; for want of attention to these things, complaints are often made that early grapes do not color well. Continue to top the laterals if they are making a vigorous growth. Vines in the greenhouse will now have advanced so as to show the fruit buds prominently, and will be in bloom by the middle of the month; top the laterals if they are getting too long, and tie in all the spurs carefully to the trellis; keep the house well damped till they begin to open their flowers, when it may be partially discontinued till the fruit is well set; keep up also a slightly higher temperature. Cold houses will now need careful watching. The vines should at once be uncovered, syringed, and tied loosely to the trellis. Keep the house rather cool, and do not bring them on too fast. Vines in the open air should be all put in order.

PEACH TREES in pots will now be swelling their fruit rapidly; by the end of the month it will be as large as walnuts. Keep the roots well watered, and guard carefully against the green fly and red spider. Fresh trees may be introduced for a succession. Now is the right time to plant trees in pots.

GOOSEBERRIES AND CURRANTS should be planted this month,

RASPBERRIES AND BLACKBERRIES should be planted this month.

STRAWBERRY BEDS should be uncovered now. Rake off the coarse covering, at first, and as soon as the weather is settled and fine, clear all away and dress and clean the beds, digging in guano or manure between the rows, if fine large berries are wanted.

FRUIT TREES of all kinds may be planted.

GRAFTING should be done now. Begin with the cherries and plums, and finish with the pears and apples.

CANKER WORM GRUBS will begin to run, and all trees should be tarred or otherwise protected from them.

FLOWER DEPARTMENT.

The greenhouse and conservatory will now require considerable attention. The whole of the plants should be rearranged and put in order for their spring growth. Some will require pruning in; others top dressing; some staked up; and others, whose beauty is past, may be carried to the reserve house, or removed into frames, and their place supplied with others just coming into bloom. All half hardy plants will do full as well in a frame as in the house; and plenty of room is important when the new growth begins, in order that it may not be crowded upon and injured. A great deal of repotting will need to be done, especially where it is desirable to hurry on some particular plants.

Open and air the house freely in good weather, and apply the syringe oftener than in cold weather. Camellias, azaleas, and many plants delight in a humid atmosphere when they are making their growth. Look after the stock of bedding plants, and see that a sufficient quantity is under propagation to supply the vacant borders of the flower garden.

Camellias now growing freely may have weak liquid manure, or guano, applied to the roots once or twice in the course of the month. Syringe the foliage every day, or every other day.

Azaleas will be in full bloom now, and should be freely watered; as soon as the flowers fade, head in the plants, and repot if they need it.

Pelargoniums will be coming on rapidly; give an abundance of air and keep down the green fly; a slight watering with manure water will benefit them.

Heaths will now begin to grow, and should have a cool place, and an abundance of air to keep them from drawing up weakly. It is the month when they suffer much by the temperature just right for other plants, but too warm for them.

Epacrises should be headed in, repotted, and have the same care as heaths.

Cinerarias will be in flower; water carefully, and be sure never to let the green fly get hold of the plants. Seeds may be sown now.

Japan Lilies will now have advanced several inches, and if the pots are full of roots, shift into the next size.

Fuchsias propagated in February, will now need repotting.

Chrysanthemums should be propagated by cuttings or by dividing the roots; the latter the best way where there is no convenience for striking the cuttings.

Bignonia venusta. Large plants will now require to be pruned in.

Acacias may be headed in as soon as they have done flowering.

Roses in small pots may now have a shift into larger size.

Orange and Lemon Trees should be pruned and repotted, placing them in a slight bottom heat, if convenient.

Oxalises done flowering may be placed away under the stage on a dry shelf.

Gladioluses may be potted now for early blooming.

Tuberoses may be potted, and started in a good hotbed.

Calceolarias should be repotted.

Heliotropes, Salvias, Verbenas, &c., in very small pots, may have a shift into the next size, and be removed to frames where they can be protected in good weather.

Sow Seeds of all kinds of annuals, wanted for early blooming, especially amaranths, eternal flowers, asters, stocks, coxcomb, &c., &c.

FLOWER GARDEN AND SHRUBBERY.

Push forward all operations now with the utmost despatch; clean, level, rake, and roll the walks; roll and rake the lawns. Prune away all dead wood and useless suckers, and head in such kinds of shrubs as require it. If anything is to be planted, attend to it in good season. Manure and dig the borders, and trench all ground intended for planting choice annuals.

TULIPS, HYACINTHS, LILIES, and other bulbs, should be uncovered as soon as all danger of frost is over. Remove part of the covering at once, and let the rest remain if the weather is too cool.

CARNATIONS, &c., in frames, should be daily opened and aired, to guard against damp. The plants may be removed to their flowering beds the last of the month.

HERBACEOUS PLANTS should be uncovered, and if in beds, they should be dug and put in order.

RANUNCULUSES AND ANEMONES may be planted now.

PÆONIES should be removed as soon as they show signs of starting above ground.

DAHLIAS for early blooming may now be started in a cold frame or hot bed.

HARDY ANNUALS, such as larkspurs, clarkias, eschscholtzias, &c., may be sown in beds or the border where they are to grow, as they do not transplant freely.

ROSES should be pruned and heavily manured.

VEGETABLE DEPARTMENT.

Make up new hot-beds for planting out cucumbers and melons; and for transplanting tomatoes, egg plants, &c., previous to removing to the open ground; a moderate heat will answer now, and the beds need not be so large as last month. The heat in the old beds may be increased by adding linings a foot thick of fresh dung.

ASPARAGUS BEDS should receive attention the first thing after the frost is out of the ground. Manure heavily, and fork in carefully.

PEAS, BEETS, CARROTS, ONIONS, and all kinds of hardy vegetables may be planted.

RHUBARB ROOTS may be forwarded in their growth, by covering with a barrow of horse manure.

CUCUMBERS AND MELONS may be sown to succeed those growing in the hot-bed, removing the plants to the open air the last of May.

LIMA BEANS may be obtained a month earlier by planting in the hot-bed or an inverted sod, and removing to the garden in May.

PEPPERS, MARTYNIAS, OKRA, CELERY, &c., may be sown now, and an earlier crop secured.

HORSERADISH may be planted this month; first trenching the ground deeply, and manuring it well.

Trench and prepare all ground intended for planting.

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ORIGINAL COMMUNICATIONS.

Art. I. *The Hardy Magnolias.*

The magnolias are the most magnificent trees among the arboricultural productions of the globe, and stand prominent amid the forest treasures of the United States. The stateliness and grandeur of their growth—the size and verdure of their foliage—and the fragrance and beauty of their flowers, render them at all times, and in all seasons, objects of the greatest interest. No ornamental trees have more claims upon the planter than these. Hardy enough, as several of them are, to endure the rigors of a New England winter, they deserve a place in the garden or grounds of every admirer of elegant trees.

With the exception of the tulip tree, which belongs to the same natural group, no others will compare with them in all that constitutes beauty of form and magnificence of flowers; the oak, the elm, and the maple, each have their merits; but they are of a different character from that of the magnolias, and cannot be compared with them. The oak pleases us in picturesque form, its sturdy growth, its varied foliage, and for the associations which invest it; but the magnolia delights us in the symmetry of its habit,—the breadth of its deep green leaves, the size of its blossoms, and the brilliancy of its rich coral berries. In the park the oak would stand conspicuous among all other trees; but on the polished lawn, the magnolia could have no rival but in itself.

Michaux, who in his *Sylvia* has described and elegantly figured all the fine species indigenous to America, is unbounded in his praise of the magnolias. An opportunity to see them in all their splendor in their native forests, could not fail to impress one, so great a lover of fine trees, with the highest admiration of their richness and magnificence. The M. macrophylla he carried home with him to the Empress Josephine, in whose garden, at Malmaison, it bloomed for the first time in 1811.

The magnolias are all natives of America and Asia, none yet having been found in Europe, Africa, South America, or Australia. They also occupy nearly the same parallels of latitude, from the 28th to the 42d. Michaux states, that of the thirteen species known to exist when he published his work, (1814) eight were varieties of America, and five of Asia; but Loudon, in his *Arboretum*, (1842) only enumerates twelve species, and one of them a doubtful one, viz., M. pyramidàta *Bartr.* Adopting his classification, seven are natives of America, viz., M. grandiflòra, glaúca, tripétala, macrophylla, acuminàta, cordàta, and auriculàta; and four of Asia, viz., M. conspícua, purpùrea, grácilis, and fuscàta. But there are many varieties and hybrids of the above, numbering, in all, about twenty. We shall only enumerate such species and varieties as are known to be quite hardy, or appear to demand further trial, with a view to prove them to be so.

Unfortunately there has prevailed an impression that most if not all of the magnolias are partially tender, and very difficult to make grow; indeed, so general has been this belief, that but few of the more enthusiastic amateur planters have dared to try them; this, added to the scarcity of good trees in our nursery collections, has retarded the general introduction of some of the finest trees that exist: and ornamental grounds, that might have now been enriched with superb specimens, are filled with silver abeles, horse-chestnuts, ailanthuses, limes, and other exotics.

It is deeply to be regretted that the most majestic of all the species (M. grandiflòra) cannot be considered sufficiently hardy to stand the climate in the latitude of 42° north. So far as has been tried, it grows tolerably well in Philadelphia, where there is a specimen in the old Bartram garden; but every few years it loses its leading shoots, by the severity of the weather, thus proving that without protection it will not thrive well here. But, cannot hybridization effect something to give it more hardiness? We shall consider this in noticing the species.

The Chinese or Asiatic species are quite as hardy as our natives; hardier than some of them. They are, however, of low growth, some of them, in fact, mere shrubs, yet still beautiful,—very beautiful, particularly M. conspicua. Their hardiness only needs to be known to render them favorites in every garden, however small.

AMERICAN MAGNOLIAS.

MAGNÒLIA ACUMINA'TA.—This species is the hardiest, as well as one of the most beautiful of the family, and equals in altitude and dimensions the M. grandiflòra, often exceeding 80 feet in height. The leaves are large, six or seven inches long, and three or four broad, even on old trees; and on young and vigorous ones nearly twice that size. They are oval, entire, and very acuminate. The flowers are five or six inches in diameter, greenish white, with a tint of yellow, and have a slight odor. The cones or fruit are about three inches long, nearly cylindrical in shape, and when green resemble the cucumber, from whence the common name, Cucumber magnolia. The seeds are rose colored.

The trunk is perfectly straight, of a uniform size, and the summit is ample, and symmetrically shaped.

This magnolia Michaux characterizes "as one of the finest trees of the American forests." Its large flowers, abundantly displayed amid its superb foliage, have a fine effect, and render it one of the most desirable of the large growing species.

The acuminàta occupies a great range of territory, extending from the Niagara Falls, its northern limit, (lat. 43°) along the whole mountainous tract of the Alleghanies, to their termination in Georgia, a distance of 900 miles. It grows most abundantly on the declivities of mountains, where the soil is deep and fertile, and the air moist. It is not found within 100 miles of the Atlantic coast, which Michaux attributes to the nature of the soil and extreme heat. It does, however, succeed very well, the Bartram specimen in Philadelphia being now eighty feet high and seven feet in circumference.

MAGNOLIA AURICULA'TA.—Next in size and grandeur to the acuminata is the present species, attaining, according to Michaux, the height of forty to fifty feet. The Bartram specimen, however, is *seventy-five* feet high, and five and a half in circumference. It is quite as remarkable for the beauty of its foliage and the size of the flowers as the last, with this addition to the latter, that they have an agreeable odor. The leaves are narrow, eight or nine inches long, and from four to six broad; and in young trees, one-third larger; the base of the leaf is divided into rounded lobes, from whence its specific name. The flowers are of a fine white. The cones are three to four inches long, and of a beautiful rose color at maturity. The seeds are red.

The auriculàta is found growing only in a small tract of country, on the Alleghanies which traverse the Southern States, 300 miles from the sea; and on the banks of the rivers which flow into the Ohio from Kentucky and Tennessee. Bartram discovered it in 1786. It is most abundant in the lofty mountains of North Carolina.

MAGNOLIA TRIPE'TALA.—Next in respect to the northern limits of the magnolia, comes the tripétala. It is found in the northern part of New York, but is more abundant further south; it is also plentiful in the Western States. Its dimensions are below the auriculàta, the Bartram specimen being about forty feet high, and three feet in circumference. Its leaves are larger than either the auriculàta or acuminàta, being eighteen or twenty inches long and seven or eight broad, and often displayed in rays at the ends of the vigorous shoots, like an umbrella, from whence its name (umbrella tree.) The flowers are also large, seven to eight inches in diameter, white, situated at the ends of the shoots, and scarcely so fragrant as the other species. The fruit is conical, four or five inches long, and two in diameter, rose colored when ripe, with pale red seeds.

The tripétala is a superb tree; its long, smooth shoots, its huge foliage, its elegant flowers, and showy fruit, forming successively through the year, objects of the most attractive interest. Its growth is rapid, and it comes into bloom early, when only ten or twelve feet high. We have already given an engraving of this species, (Vol. XII, p. 61.)

Magnolia cordàta.—This species, Michaux remarks, "very nearly resembles the acuminàta, and has been confounded with it by the inhabitants of the regions where it grows," and Loudon, in his *Arb. Brit.*, states it is only a variety of that species. It attains about the same altitude as the tripétala, (forty or fifty feet,) and only differs in its broader leaves, which are four to six inches in length, and three to five in breadth, and its flowers, which are yellow, marked inside with a few reddish lines. The cones are three inches long, green, and the seeds are deep red.

The cordàta was discovered by the elder Michaux, who found it on the banks of the river Savannah, in Upper Georgia, and on those of the streams which traverse the back part of South Carolina. It never makes its appearance in forests, but only in isolated situations, along the banks of rivers.

This species is rarely met with in cultivation; and is less known than either of .the above, though Michaux speaks of it as "resisting an intense degree of cold," and therefore a most interesting one to amateur planters. It will thrive in our climate, and should be generally introduced.

These four species are perfectly hardy, and will grow in any good locality throughout Massachusetts, and probably much further north. Fine specimens of the three first may be found around Boston, particularly in the Botanic Garden at Cambridge.

Magnolia macrophylla.—This remarkable species has generally been considered too tender for our climate. It grows freely in Philadelphia, and there is a tree in the old Bartram garden, thirty feet high, and twelve inches in circumference. We think it deserving of a more general trial; and believe it will be found quite hardy. It loves a good generous soil, and a dry substratum; like the ailanthuses and many other trees, it soon perishes, if the roots are soaked with water all winter.

It is the most rare of all the native magnolias, being only found in the mountains of North Carolina, and in Tennessee; always sparingly dispersed, only a few trees being found together.

In its general appearance it is like the tripétala, and it is always accompanied in its native forests by that species. The leaves are very large, often measuring *thirty-five* inches long, and nine or ten broad; they are oblong oval, and heart-shaped at the base. The flowers are the largest of all the magnolias, being frequently eight or nine inches in diameter, and of a fine white, with a small deep purple spot as the interior base of the petals, which are six in number; they also diffuse a fragrant odor. The cones are four inches long, and rose colored.

Nothing can exceed the magnificence of its numerous blossoms, set off by the rich and luxuriant foliage which surrounds them. It appears to us that no care or expense should be considered too great to thoroughly test the hardiness of this superb species.

MAGNOLIA GRANDIFLO'RA.—There can be but little hope of acclimating this species; certainly as regards majesty of form, magnificence of foliage and elegance of flowers, it is the finest tree in the world. Bartram says its trunk resembles a "beautiful column," and its dark green foliage, "silvered over with milk white flowers." It attains the height of eighty to one hundred feet. The leaves are about a foot long, and three or four inches wide, evergreen, thick, smooth, glossy, and very brilliant on the upper surface. The flowers are six or eight inches across, and appear at the ends of the last year's shoots; they are white, and so exceedingly sweet as to be overpowering to many persons.

It is found growing as far up the Mississippi as Natchez, and as far east as North Carolina, and is very abundant over an extent of 2000 miles of territory. It grows in cool and shady places, where the soil is loose, deep and fertile.

Thoroughly protected, no doubt it would grow well in the latitude of 42° north. But a tree that requires this trouble can never become a popular variety; the only hope is in the production of hybrids, which will not take away its evergreen character, but render it more hardy. The French and Belgian Catalogues enumerate a variety which thrives where the grandiflòra will not grow; it is called the Magnòl*ia* grandiflora, var. gallisoniere, and we hope its hardiness will be tested.

These two species, the grandiflòra and macrophylla, we have introduced here to render planters and amateurs more familiar with their beauties and claims upon their attention. We cannot consider them yet among the hardy species.

ASIATIC SPECIES.

MAGNOLIA CONSPÍCUA.—(The Yu̇lan magnolia.)—This species is said to have been first cultivated in China, in the year 627, and has ever since that time held the first rank as an ornamental tree in their gardens. In its native country, when full grown, it attains the height of thirty or forty feet. The largest plant in Great Britain, in 1835, when it was measured for Mr. Loudon, was twenty-seven feet high, and at that time had open 5000 flowers! It is quite rare in our gardens, and but few specimens of any size are to be found.

The conspícua of which we annex a drawing, *(fig.* 13,*)* assumes a regular conical shape, with numerous branches and twigs, and the flowers, which are milk white, expand before any of the leaves, blooming in April or May. It blossoms when only two or three feet high, and grows so well as to reach the height of ten feet in six or eight years.

It is a perfectly hardy species, standing a temperature of 25° below zero, without the least injury. A fine plant of it on the elegant grounds of T. Lee, Esq., Jamaica Plain, blooms beautifully every year. It is quite as hardy as the hardiest of our American kinds.

It grows readily, preferring a deep, rich, mellow soil, in a rather dry locality, and while quite small, if in a bleak place, may be slightly protected with a few pine boughs; but as soon as well established it needs no more care than the hardiest shrub. No garden should be without it.

Fig. 13. *Magnolia conspicua.*

MAGNOLIA PURPU'REA.—A smaller growing species than the conspicua, found in Japan, and introduced to England in 1790. Its height is about ten feet, when full grown. Stems numerous, not much branched; leaves, large, deep green;

flowers, large, rich purple on the outside of the petals, and nearly white within, the contrast of the two colors rendering it peculiarly beautiful. It should have a light, rich earth to grow in, and a dry subsoil, when it will prove quite hardy, and a most ornamental species.

MAGNOLIA SOULANGEA'NA.—This so closely resembles the conspicua when not in flower, that it is difficult to distinguish it. It is a hybrid, raised at Froment, near Paris, by the late Chevalier Soulange Bodin, and supposed to be between M. conspícua and purpùrea, as they stood near together. It only differs from the former species, in having its flowers slightly tinged with purple. It is a fine shrub, and with the other hardy ones, indispensable in every fine collection.

These are all the hardy species of this grand tribe, and they are deserving of far more attention than they have received. We commend our account of them to every amateur and lover of trees and shrubs; and though longer than we intended to make our article when we commenced, we hope they will find it worthy of their perusal.

ART. II. *On the Picturesque.*

By WILSON FLAGG.

THERE is no term in the English language which has, in general, been so badly defined, and used with such a vague signification, as the word picturesque. The best authors, including those who have written particularly on the class of subjects comprehended by this term, have given very imperfect definitions of it. They have commonly defined it in one sense, and used it in various other senses. Thus, Sir Uvedale Price, in defining the picturesque, endeavors to limit a word of very general and complex signification so as to make it apply, like the words *smooth* and *rough*, to only a single class of ideas. This author, in many of his remarks on the origin of our ideas of the beautiful, was misled by the false theory of Edmund Burke, who was neither correct in his definitions nor profound in his speculations. In coming at the meaning of a term it is not the inventive faculty that ought to be employed. Our object should be to ascertain in what senses it is generally used and applied by authors, both in poetry and prose, *who have not written expressly on the subject*, and who are not wedded to a theory, and define it accordingly.

It is thought by many that too much labor is often bestowed in speculations upon the meaning of a word; but they would find less fault if they considered how greatly the correctness of a whole science depends on the accurate definition of terms. In the present case, the definition of the word picturesque includes in itself, to a great extent, the science of the laws of beauty. Let a person have but a clear understanding of the meaning of this word, and he has obtained a considerable insight into the principles that govern our ideas of the beautiful, and the origin of our agreeable sensations. It is worthy of remark, in the premises, that almost all writers who have used the word picturesque, have leaned, in their application of it, towards those objects which have a rude, melancholy or desolate expression, rather than to those expressive of gay, shining and lively qualities. The same habit prevails with regard to the use of the word *poetical*. If there be something romantic or a certain amount of sadness associated with any scene or object, it is more apt to be called poetical as well as picturesque. This fact serves to illustrate a certain principle, which I shall maintain, that adversity and misfortune, or the expressions of these qualities, are favorable to picturesque effects, by more powerfully exercising our sympathies.

All men have a natural susceptibility to be agreeably affected by scenes of beauty; and this disposition needs only a little culture to open to them an inexhaustible source of innocent pleasure. The power of different individuals to be thus affected is proportionate to their mental culture, and to the warmth of their natural sensibility. An extravagant amount of this kind of enthusiasm might interfere with one's thrift, and his success in the practical business of life; but there is little danger that with many it would become a passion, while for all it would furnish a delightful recreation. The general effect of the cultivation of this taste would be to check one's disposition to be corrupted by avarice or sensuality, and cause men to be less grasping and selfish in pursuing the gifts of fortune. In many people this taste for beauty, like the higher moral sentiments, is sufficiently alive to be a source of continual pleasure. It is the dormancy of these moral faculties in man in general that causes half the intemperance and sensuality that prevail in the world.

We are thus led to believe that an inquiry into the sources of the pleasure we derive from the contemplation of the various scenes of nature, must increase our own ability to use them for our advantage. The nature of the picturesque is not a senseless study, or a mere wanton gratification of refined curiosity. We are all charmed by certain objects in nature and art, especially when the two are combined in agreeable harmony; and an acquaintance with the character of those objects, those scenes and combinations of forms and colors, which are capable of yielding pleasure to the mind through the medium of the sight, is essential to success in our attempts either to improve the general aspect of the country, or to beautify our own estates.

We may define the picturesque as that visible quality in any scene or object which, without being necessarily beautiful, excites an agreeable emotion or sentiment. Very early in life one is agreeably affected by brilliant colors and symmetrical forms. These qualities are ingredients of intrinsic beauty. But as one acquires a knowledge of history and romance, and learns the connection between certain objects and certain interesting events, they acquire in his mind an expression that renders them even more pleasing than many other things which are intrinsically beautiful. Even in winter, when nature is divested of almost all her charms, he derives from a view of the barren landscape a sentiment not the less agreeable because it is allied to melancholy. That quality, in a scene that is void of absolute beauty, which gives it the charm of a beautiful object, is the *picturesque;*

and of all kinds of beauty, this requires the greatest amount of mental culture to be fully understood and appreciated.

The picturesque is not so much a quality of the object itself, as something associated with it in the mind of the beholder, and affecting it, not like the beauty of symmetrical forms and agreeable colors, by an intrinsic property, but by suggestion. It does not consist of roughness or irregularity; though certain scenes may be rendered more picturesque by these qualities. Symmetry, smoothness, and brilliancy of hues, produce another class of sensations; yet many a picturesque object may possess all these intrinsic properties of beauty. Thus the landscape in autumn, when arrayed in a gorgeous variety of hues, is still more picturesque than in the plain verditure of summer, because those beautiful tints are suggestive of certain poetical images and sentiments connected with the decline of the year. A scene artificially decorated may be no less picturesque than a rude and native scene; but the ornaments must be simple, and associated only with agreeable images.

Though the absence of intrinsic beauty is often favorable to picturesque expression, it is not essential to it. The mind is in a better state of abstraction, when no beautiful quality in the scene draws the attention away from those objects which have only a suggestive interest; or in other words, when the mere pleasures of sight do not interrupt the exercise of the imagination. The dwellings of the poor are better subjects for the painter than the mansions of the rich, not because they are plainer, but because they are more suggestive of a train of agreeable reflections. The mind is affected with more pleasure by a picture or a scene in real life that awakens one's sympathies, than by one that only causes admiration. We feel compassion for the poor, and are interested in their simple habits of life. The sight of their rustic dwellings excites these emotions, and tranquilizes the mind, by affording a pleasant exercise to the imagination. Men are also prone to feel envious of the wealthy; and their splendid villas seem as if intended to impress their minds with a sense of the superiority of the occupants. Hence, though we may contemplate them as beautiful specimens of architectural art, they have but little picturesque beauty when compared with many of the inferior dwellings of the poor. It shall be my endeavor, however, in some future essay, to point out certain principles, which might enable us to add a picturesque expression to the mansions of the wealthy, as well as to the humble cottages of the poor.

While contemplating any scene, thousands of ideas and images will enter the mind and pass out again so rapidly as to make it difficult to perceive all the reasons why we are agreeably or disagreeably affected. When we view the picture of a humble cottage, the idea of the artless civility of the inmates, and of the welcome attention we might receive, if we entered such a place, unconsciously influences the mind, and renders the picture the more interesting. But when we look at the representation of a costly mansion, we cannot avoid thinking that a formal letter of introduction alone would gain one admittance into its precincts; and the picture, in spite of its real beauty, is made somewhat disagreeable by these reflections. If it were the residence of superior beings, we should be inspired by a feeling of veneration, which would cause a train of sublime images to be associated with it. Hence a magnificent church or cathedral, unless there be some false taste in its architectural ornaments and proportions, may be truly picturesque, notwithstanding its splendor and costliness, because we regard it as the house of God. The seats of the nobility may sometimes be regarded with similar feelings of reverence by the simple and ignorant peasantry.

No scene or object can be picturesque without simplicity. All truly great paintings appeal to the sympathies of the human heart by representing some simple scene that powerfully affects the imagination;—a solitary traveller seeking protection in a cave or a ruin from the perils of a storm, or a few sailors half perishing on a raft in the midst of the sea. A picture of a weary traveller by the wayside, leaning on his staff, is a scene for the poet; while a king sitting on his throne is left to the dry page of the historian. But let a king be dethroned and seek shelter in a woodman's hut, and he becomes, in that situation, one of the most interesting objects that can employ the genius of poetry or romance. As soon as the great have fallen into adversity, they are candidates for our sympathy, and we feel the more interest in them in proportion as they have fallen from a lofty eminence. They are now reduced to our own level of fortune, while their former condition seems to render them worthy of a better fate. They may still be as happy as in their prosperity, but they can more easily enlist our sympathies, because their present condition is one of greater simplicity.

A sheepfold of simple and rather fanciful structure, with a small flock around it, either reposing or quietly feeding; a group of village youths and maidens, engaged in rustic amusement under the spreading branches of an oak; a little skiff buffeting a storm, at a short distance from harbor, or the wreck of a larger vessel stranded upon the shore;—all these scenes derive their picturesque quality from their power of exciting agreeable or sympathetic emotions. A little sheepfold, surrounded by its harmless occupants, is in itself but a trifle. Why does it affect the mind with an agreeable sensation, like something intrinsically beautiful? It is not that we care much about the sheep. We feel but little sympathy with them, and but little interest in their welfare. The picture is suggestive of something not seen, but easily imagined, which is truly interesting. It intimates to the observer that there is a farmer's dwelling, at no great distance from the fold, surrounded by a pleasant farm, and occupied by a happy family. Besides awakening a variety of pastoral images, connected with the fictions of poetry and romance, it leads the imagination through many a smiling scene of rustic toil and amusement.

A scene or an object is made picturesque by any quality that causes it to awaken an agreeable sentiment or an interesting train of thoughts. A ruined tower is more picturesque than the same would be in a perfect condition; because in the latter case it is simply suggestive of certain romantic incidents of history which are connected with it; whereas, in the former case, it not only suggests the memory of these same romantic incidents, but awakens also those poetical sentiments that always attend the contemplation of venerable ruins. The word picturesque is, therefore, a complex term, which is used like those words that stand for *genera* and not for *species;* and may sometimes stand as a synonym for one epithet, and sometimes for another. When it is applied to a castle, celebrated in the romance of history, as the Prison of Chillon, where Bonnivard was confined, the term, in this case, is but a synonym for *romantic.* The castle suggests to the mind those interesting events that are associated with it in our memories. It is picturesque because it is romantic, and the two words, when applied to this object, are made to signify the same thing.

But here is a neat, though a rude little cottage, with two or three smiling and ruddy children at the door. It seems to be the dwelling not of beggars, but of rustics. A woodman is standing near, in the act of cutting a branch from a neighboring tree. He seems to be the father of the family. Two cows are reposing near the shed, and a few others are quietly feeding or reclining on an adjoining slope. When we call this scene picturesque, we do not mean the same as when we apply the same term to the Prison of Chillon. In this case the word is used as a synonym of *pastoral* or *rural.* It is this pastoral character that renders it interesting, by its suggestiveness of rural content, and of the happy life of a humble tiller of the soil. It is beautiful because it wears such a quiet pastoral look, and is associated with all those charming fancies so generally awakened by the sight of rustic simplicity.

We pass onward until we arrive at an ancient burial ground. We see the monuments gray with long exposure to the atmosphere, and dilapidated with age. Some of the old headstones are leaning considerably from their upright position, and many of them have sunk deeply into the earth. The whole scene is expressive of *solemnity,* a quality distinct from sublimity, but productive of equally powerful emotions. The solemn is always picturesque when it plainly characterizes a scene. The emotion arises from a union of religious feeling with an idea of the shortness of life, and of our own ultimate destination. When we call such a scene picturesque, we mean that it is interesting from its solemnity. I have instanced an old burial ground, because, when compared with a new one, it contains fewer objects that serve to divert the mind from solemn thoughts. An old burial place is more unique, all its objects having been harmonized into a uniform expression by the agency of time.

As we move forward in the same grounds, we see a new-made grave. A woman stands leaning over it, apparently in affliction. She holds a little child by the hand, who is looking sorrowfully in her face. We fancy immediately that we see the desolate widow and fatherless orphan, and we are moved with compassion. This scene should be characterized as pathetic. It is picturesque, because it has the power of awaking sentiments of pity and sadness. In all these cases the imagination is the source from which the scene borrows its charms. To a man of cold heart and torpid imagination, nothing is picturesque, nothing is poetical, solemn, pastoral or pathetic. Hence it is not difficult to see why the man of cultivated imagination and tender feelings must have sources of happiness which are entirely hidden from the ignorant boor, or the dissipated sensualist.

We proceed on our ramble until we reach a little nook or recess in the woods. A precipice of fern-clad rocks bounds it on two sides, a pleasant grove on another side, while in front it overlooks the neighboring prospect. Why do we call such a scene picturesque? Under what head should we class the emotions awakened by it? They are those of quiet and tranquillity. The scene is associated with ideas of pleasant seclusion; and the little nook is picturesque because it is *sequestered,* and fitted for a rural retreat for friends or for lovers, where they may pass an hour unmolested and unobserved. Its adaptedness to such pleasant seclusion is perceived instantaneously, and affects the mind before we are conscious of the reasons, as we love the possession of a beautiful and benevolent countenance, without pausing to analyze its expressions.

We remain in this quiet retreat, looking out to the west until the day declines. We have been gazing for some minutes on the landscape, but our eyes are now raised above the horizon to contemplate one of the most glorious scenes in nature. The sun is just setting behind a pavilion of clouds, of the most beautiful and infinitely varied forms and groupings, and tinted with the constantly changing hues of the declining sun. The scene is full of absolute beauty. A child who was too young to appreciate picturesque expression, would look upon it with delightful sensations. But to the man of cultivated imagination it is also highly picturesque. Yet there is nothing of that rudeness about it which is thought by some writers to be the very essence of picturesque beauty. It is an ethereal scene; and it elevates the mind by suggesting the idea of infinite beauty and grandeur. The emotion attending it is one that is somewhat religious, hopeful and sublime.

The sun has set: and as we are journeying homewards, we follow a path that leads along the banks of the seashore. We soon arrive at an opening between two hills, just wide enough to afford a sight of as much of the ocean as may be comprehended in one view. It is twilight: and just over the blue waters the moon has risen in full splendor, and her mellow radiance glows serenely upon the tremulous tide. As the sunset scene was suggestive of ethereal hopes and aspirations, the present scene inspires emotions of serenity. Poets have made more use than painters of the effects of moonlight: but nothing can be more picturesque. The soft shadows cast upon the land and upon the water, and the mild light that gleams from hill and spire, that sleeps upon the meadow, and glitters in the running brook, serve to fill the mind with a delightful tranquillity.

I am not certain why the rudeness of a scene should increase its picturesque expression. One cause, undoubtedly, is the contrast it affords to the objects which must always attend it to give it character. Rudeness, therefore, would seem to be the groundwork for the representation of interesting objects, rather than a necessary ingredient of the picturesque. A large rock, in mid ocean, where it is exposed to the fury of winds and waves, has an expression besides that of rudeness. It is regarded as an emblem of fortitude, and is considered a just resemblance of a virtuous man, enduring the storms of adversity and resisting temptation to evil. Such a rock derives a part of its picturesque expression from symbolizing certain noble qualities of the human soul. It may also be suggestive of the perils of shipwreck, which would be so liable to happen to a vessel that should encounter it in the darkness of a tempest.

Its rudeness, without these associations, would scarcely render it picturesque. But if this rock were the habitation of man, containing one solitary cottage, with a few vines clustering around it, the whole scene would be highly poetical and picturesque. The rudeness of the situation prepares the mind to sympathize with the inmates of the cottage, thus exposed, like the rock on which it stands, to the billows and the tempest, while the vegetation reared in its vicinity affords a pleasing contrast to the desolation around it. Rudeness, therefore, is only a secondary quality of the picturesque, having no necessary connection with it, but serving as a striking accompaniment to scenes of pastoral beauty, innocence and simplicity. The rudeness of a cottage and of the scenes around it is also an apparent evidence of the simplicity of its inhabitants, a quality which is always interesting in the human character.

Before I proceed to the application of these general principles to particular objects, I am desirous of bringing forward a few other views of the subject, which would extend this essay to a tiresome length. I shall, therefore, present the conclusion of these remarks in another number of this journal.

Beverly, April, 1854.

P. S. Mr. Editor,—These remarks on the Picturesque, though they may not seem exactly adapted to the general plan of your journal, I send as a sort of necessary supplement to the articles on Rural Improvements, which I have already furnished, and as a preliminary to others that may follow.—W. F.

The article is by no means out of place in our pages; on the contrary, it is just such a paper as we feel a pleasure in presenting to our readers. We agree fully with our correspondent that few words have been more vaguely defined than that of picturesque, and we shall be happy to present his views upon the more definite meaning and application of the term.—Ed.

Art. III. *Introduction of Native Trees and Shrubs into Artificial Planting.* By John L. Russell, Prof. of Botany, &c., to Mass. Hort. Society.

We have written frequently, with what persuasion we were capable, on the propriety of bestowing more attention to our resources of ornamental plants as subjects of ornamental culture. We resume the topic by reference to those of a larger growth, more particularly of our trees, as deserving more heed than they seem to obtain; and doubtless much of this inattention to their merits is attributable to the ignorance prevalent, rather than to any designed neglect. There are very few persons who are actually acquainted with the most common plants that grow about their doors; a degree of ignorance they could scarcely pardon in others should it be shown towards those of foreign growth. Many a fine plant need only to be brought from Japan or Russia to become an universal favorite; yet year after year wastes its charms unheeded in the neat wild copse or from some rocky cliff. And we cultivate stiff and prim looking pines from Austria or from Scotland, when far more graceful species and more attractive, were worth some trial of introduction, nearer home.

It has struck us with some surprise that the magnolias and many fine trees of which Michaux makes mention, are not oftener seen in our lawns and garden surroundings. Honorable exception may be made in favor of the magnificent tulip tree, which is becoming fast a *protegé* of everybody who aims for variety and beauty. But why not have more of the *Magnolia tripetala* as its hardy and appropriate companion? With the exception of two or three specimens at Cambridge, in the Botanic Garden, and a fine old specimen in an old and fine belt of trees at Salem, we hardly should know where to go in quest of this tree, unless in perhaps a nursery, and there, as very like, an unique specimen or a rarity. We make an annual visit to one of them, when it opens its flowers, and again when its crimson seeds are pendent from the cone, and dream, under its canopy of broad green foliage, of the noble forests of its sister species in our sunny south. And when myriads of snowy bells wave from the tortuously bent twigs of the *Halesia tetraptera*, which grows at its foot, we wonder why men will seek for so many double pæonias and monstrosities of floricultural art, losing sight of the rare beauty of shrubbery and of nobler planting.

Of the magnolias, Michaux says, that the trees and shrubs, which compose this genus, are, without exception, natives of Asia and America, where they are found nearly in the same latitude, being included between the twenty-eight and forty-second parallels.

Desirous as we may be of having more attention bestowed on our *own* trees and shrubs, it were, notwithstanding, an evidence of a correct taste to make such selections from the various species of a genus, from what parts of the earth they may come, where there are any prospects of acclimating and then bringing them together. But if we are to have Asiatic or European objects for our pleasure-grounds and planting, let not our own become of no value in our eyes because they are nearer home. This were like the common remark, or the common inquiry raised respecting some beautiful flower,—"Isn't that a *wild plant?*" meaning thereby to insinuate, that if a native it were of no value. Many of the most cherished though common perennials of ordinary gardening are no more than English weeds, or at best the products of western wilds; the very same, if growing in *our* grain fields, would be despised. How many think of the corn poppy of Europe, the blue centauria, the githage campion, as pests of European grain; here known as anemone poppies, blue bottles, and mullein pinks! Now we confess to the weakness that we love them all; and that weeds though they be, they are only so because out of their place. So while we would like to have some of our higher hills empurpled with heather and gold-spangled with *furze*, we would not lose our *bearberry*, our *Epigæa*, or our *mountain cranberry*. Or, if we could introduce on our waste sands of Cape Cod, or on similar tracks of interior pine plains, some fine showy plant from abroad which would render them more pleasant to the eye, we would not lose those mimic heathers in *Polygonum articulatum*, or the tufted moss-like Hudsonias, with their yellow blossoms. In fine, if we are to ransack the world "for far-fetched and thus dear bought" rarities or common weeds, as the case may be, let us love *our own* all the more, as losing nothing by comparison.

While again it would be the height of affectation to discard all the gorgeous tribe of double pæonias, and while we should regret that they ever should "get out of fashion," were that possible, so it were a greater ridiculous taste that cherishes them because they belong mostly to the Celestial Empire, and were brought from "beyond the seas." I love to think that they are represented by co-species of American growth, and that NUTTALL finds other kinds on the bushy plains and in the valleys of the mountains, in the vicinity of St. Barbara, Upper California; and HOOKER declares, on the authority of the collections made by DOUGLASS, that they grow near the confines of perpetual snow, on the subalpine range of Mount Hood, in Northwest America! It may not be a century ere *P.* Bròwn*ii* and *P.* califórnica may grow side by side, in multiplex-petaled variety, with our favorite garden sorts.

Give us, then, our lovely Magnòl*ia* glaúca in more abundance, if we are to have the snowy white Magnòl*ia* conspícua; and give us the umbrageous foliage of Magnòl*ia* tripétala, that it contrast with Magnòl*ia* purpùrea; each of which foreign species we have seen quite hardy on the Hudson River, and for aught we know may be acclimatized nearer Boston. Then why not plant Magnòl*ia* acuminàta, a tree from 60 to 80 feet high, and ranging in growth from New York to Georgia? Or why not experiment on Magnòl*ia* cordàta, native of the mountains of North Carolina and Georgia? Or Magnòl*ia* Frasèr*i*, growing on the Alleghany Mountains, from the head waters of the Susquehannah to Georgia, as Pursh declares? Or, lastly, the Magnòl*ia* macrophylla, with its purple spotted petals and rich cordato-spatulate leaves, and found as far north as North Carolina? As to Magnòl*ia* auriculàta, (*Michaux's Sylva*, pl. 56,) NUTTALL says, "in Bartram's Garden, at Kingsessing," (Pennsylvania) "there is a tree of this species seventy or more feet high, and with a trunk of the diameter of two or three feet." Perhaps some of them may prove too tender for our severest winters, yet who tell can what half the care that is bestowed on Japan cryptomerias and foreign pines may not do for our own gorgeous forest trees?

The rare beauty and camellia-like contour of the Gordonia species render them objects of desire if they could be adapted here, or further north. Any one inspecting Michaux's plate of Gordòn*ia* pubéscens, would feel warranted at making some considerable provision by way of partial shelter in introducing it into his grounds. And the Loblolly bay or G. casyanthus, of the southern maritime states, makes us almost envy a more congenial clime for the specious beauties of our native flora.

If we do not greatly err, the Sweet gum might be reared more extensively and introduced into our ornamental planting. This tree (*Liquidamber styraciflua*, Mx.) is actually accredited to as northern a habitat as the sea-shore towards the northeast between Portsmouth and Boston. Whether it has been met in so northern a locality by any late botanist we are not able to state; but if considered to be thus hardy, it were worth while to institute experiments to introduce its culture.

The Buttonwood tree, once a favorite but now an object of regret, were worthy some care to restore it, if possible, to its place in artificial planting. Some noble specimens in front of the house of a friend of ours, were more valued by him than his venerable mansion; but notwithstanding his estimation of their majestic beauty and umbrageous spray, the fell disease shortens their æstival honors and renders their continuance more and more problematical. We were encouraged in our unchanging belief that this species of forest tree will eventually recover, in meeting with those in the woods about Brattleboro', Vt., laden with seed-balls; a result which our own, with scarcely an exception, have failed to show. In the vicinity of St. Barbara, Upper California, NUTTALL discovered a new species, to which he gave the name of *Platanus racemosus*, and which perhaps might prove a good substitute for our own. "It does not appear, in this unfriendly climate, to arrive at the gigantic magnitude of its eastern prototype," he says, "though it equally affects rich bottom lands and the borders of streams. At first view it would be taken for the ordinary species; but a glance at the leaves no less than the fruit, would remind the eastern traveller that he sojourned in a new region of vegetation, and objects, apparently the most familiar he met around him, associate them as he would, were still wholly strangers."

The objection which may be urged against the buttonwood, does not make it appropriate for planting near dwelling houses, in our cities or towns; yet we scarcely know of any tree which repays its culture more, when ample space and verge are allowed. We are by no means sure that it would be a poor investment of property to resort to the artificial sowing or planting of forest trees for the purposes of fuel. And many an uncultivated piece of land we have regarded sorrowfully, in its lying waste, where arboriculture could do much.

The Oriental Plane, (*Platanus orientalis*,) a native of the east, where umbrageous trees are not so numerous as they are in North America, deserves regard. It grows from 70 to 90 feet high, and has a trunk of proportionate dimensions. This species was highly prized by the ancients, and under its shade science and philosophy were often taught by the masters of learning and wisdom in olden times. These three hardy and desirable species might be made conducive of public taste by judicious planting.

Our meadows and swampy woods are greatly enlivened about this season of the year by the snowy blossoms of the Mespilus, of which we have in Amelánchier canadénsis, the *shad-bush* or *service berry* or *June berry;* and in whose pleasant fruit in the season of the true berries, (blackberries, blueberries, &c.,) we recognize the acquaintance of our early days. These shrubs are easy of cultivation and repay any one's care, growing even to the size of considerable trees. Indeed, where varieties of smaller trees are needed to intersperse among shrubbery, our country may be deemed truly rich in its means of gratifying such a demand. Any one familiar with the woods and forests of Pennsylvania, or better of Ohio, cannot but recall the elegance of their May blossoming, in the native crab apple, the red bud, and the flowering dogwood. The impression which this latter fine tree made on the remembrance of an acquaintance of ours, enabled him to recognize in it the delight he experienced, when a very small child, on then seeing its large flowers; the interval of many years withholding the recurrence of its sight. Fortunately this latter tree is already a favorite and used for ornament. But what will be our delight when we can plant beside it the noble blooming Córnus Nuttáll*ii*, which was found growing in the rich lands near Fort Vancouver, not less than 50 to 70 feet high, with large, oval, acute, *lucid* green leaves, and large clusters of crimson berries; and whose flowers, or floral involucres, were nearly six inches in diameter! Would you see how fine this new species of our own country is, and what it promises to our ornamental planting, only look at the 367th plate of AUDUBON'S Birds of America, the first edition, and behold it under the magical imitation of this great painter and naturalist! This species prevails, according to Nuttall, probably as far as Frazer's River or Sitcha; so that there can be little doubt about its being as hardy as the common dogwood (*C. florida*), and as more deserving cultivation. Seeds brought to England by Mr. N. had germinated, so that we may hope to hear more from it yet.

As to the Native crab, of which we make mention, no doubt remains of its cultivation, as we have proved from plants raised from seeds of the fruits brought from Pennsylvania several years since. Another species of this pyrus meets us in the maritime portion of the Oregon territory in the elegant *Pyrus rivularis* or River crab, a tree about the size of the Siberian crab, and growing from 15 to 25 feet in height. Its flowers are in corymbs, of a white color, tinged with red, and succeeded by clusters of fruit, small and purple, scarcely the size of a cherry, and of agreeable flavor. What cultivation may do with this plant, cannot be conjectured, by way of improving it for use; for beauty, nothing but its native habits need commend it.

The smaller fruits, so remarkable for beauty in their wild characters, recommend themselves to the arboriculturist for ornament. We have seen the pretty dwarf bush-trees of *Prunus americana*, (Marshall,) known in the Middle States as Wild plum, which, under cultivation, has become more than a tolerable fruit. But, without regard to its gustatory qualities, why ought we not to introduce our wild fruits for their beauty; let them bear, if they please, berries or fruits as acerb as the *wildest* wilding ever conceived? There are plenty of birds who will find them palatable, and plenty of eyes which will admire their optical charms, and which will admit their appeals to that higher sense. Who cares about regaling himself on choke cherries or black wild cherries, and yet is willing to admit himself indifferent to their tasselled racemes of white pretty blossoms, making every New England hedgerow so attractive in summer? For our own part we confess to the delight in the smaller scarlet-fruited *sour*, *very sour*, perhaps the *veriest sour* Boreal cherry, whether in bloom or in fruit, and love to see it among our rocky woods. And if we could obtain some of those treasures in this line of small trees revealed to us by Nuttall; for instance, the *Cerasus mollis*, on the Oregon River and its tributaries, of a style quite different from any of our acquaintance in these smaller fruits; the Holly-leaved cherry, *C. ilicifolia*, from Upper California, whose foliage is shining, rigid, and evergreen, and whose remarkable and elegant appearance renders it well worth cultivating as an ornament, ranking with the true Laurels, and the many rosaceous-flowered shrubs to be yet found, and to be acknowledged as of marked and superior charms, we should see a new epoch in the taste for ornamental planting, we are quite sure.

And this reminds us of the claims which our native thorns make upon our attention. As plants for hedges, several species and varieties have been for some time cultivated, it is true; yet, as ornamental shrubs, scarcely heeded. Nay, we know of one person who excused himself for introducing a "*thorn bush*" into the garden, on the plea that it was one of a lot belonging to a friend, now deceased. It was in good taste to cherish what a friend had once cherished, but a better taste to dare to admire the thorn for itself! The clipped and cut figures of the Cratægus in our prim hedges, deny us the advantage of its native beauty. The many species indigenous to this country would repay any one's care in developing their beautiful flowers. NUTTALL found, on the banks of the Wahlamet River, the *Cratægus sanguinea* of Pallas, which, according to this latter author, is a native of Siberia, and, judging from the plate in the 6th vol. of Michaux's Sylva, we should consider it a beautiful shrub in any condition of growth. Its size, too, nearly that of an apple tree in height, and the gratefulness of its haws as food, mark another fine *native* plant. A more southern species, found in Georgia by ELLIOTT, and in Texas by DRUMMOND, is the *C.* arborėscens, and, if not too tender, would prove a great addition.

The extreme beauty of the Buckthorn as a hedge plant, has rendered it a greater favorite than the Cratægi, from their liability to be ravaged by the borer, proved to be. But we lose the real native green of this bush unless it have a chance to grow by itself. We recall two such bushes, of great size and of elegant proportions, and are surprised that the plant is not more cultivated with regard to this its real features. In Bartram's Garden, at Kingsessing, was a tree of a southern species, viz., *Rhamnus carolinianus*, which attained the height of 25 feet in twenty years. From the significant fact that Mr. Say collected this species within the range of the Rocky Mountains, we might obtain some hint of attempting its culture in our vicinity. Its larger leaves, from three to six inches long, and from one to two inches wide, its large black fruit, and somewhat showy whitish blossoms, all abundantly recommend its trial.

Another species still, bearing some resemblance to the last, is Pursh's Buckthorn, *(R. Purshianus,)* growing from ten to twenty feet high, and found within the Rocky Mountain range, and by MENZIES near Nootka, in the Northwest Territory. Why should we not have these hardy kinds in our gardens and among our shrubs ?

Some trees, nearer home, growing in our very next swamp or rocky pasture, would repay a trifle of care and regard. We refer to the Sour gum in the *Nyssa multiflora,* a middle sized tree, with dark grey bark, and with a horizontally spreading top, of rare beauty in some situations, especially when growing alone. Its deep green shining leaves, and, when tinted by autumn into purple and scarlet, accompanied by its blue, waxy berries, cannot fail to make it one of the observed of all other smaller trees. We think much of the *Celtis occidentalis (Sugar berry, Hack berry,)* generally a small tree, but sometimes growing quite large, whose sweet, dry and edible plums, remaining through the winter, help to relieve the usually regarded cheerless aspect of that season. We have seen small individuals of the hop hornbeam (*Ostrya virginica)* that we deemed of much merit, laden with their mimic hop-like aments ; and, did we not fear to tire the patience of our readers,—if, forsooth, we have secured any such patrons,—we might enlarge indefinitely on our theme, so fascinating to us is the aspect of a tree, and so charming many a wild shrub, which need only a better acquaintance (setting aside even a moiety of such enthusiasm as our own) to render them favorites with those who would have the truly ornamental about their houses and premises.

How shall we labor to introduce a more correct taste in these particulars ? One way, and one not easily applicable to present ideas, is to cease to admire everything foreign *because* *it is foreign.* This is the great fault of our nation, and we see this in every department of social life; and, strange to say, that with such advantages as we possess, we should be so universally inclined to defer to extranational opinions and modes of life; inclined to be led in our tastes, be instructed in our schools, be guided in our science, be disciplined in our religion, be influenced in everything by those from abroad. As if, instead of a healthy manhood, to which two centuries' age should have brought us, we were only children, and as such, that even Nature should be interpreted to us: to us, who are Nature's sons.

Salem, April, 1854.

ART. IV. *Pruning Newly Planted Fruit Trees.* From the *Revue Horticole.* With remarks by the EDITOR.

IN our last volume (XIX, p. 114) we published several reports of the conversational meetings held by the members of the Massachusetts Horticultural Society, in the early part of the season. Among the subjects which came up for discussion was that of the cultivation and pruning of trees, particularly the pear. At that time we embraced the opportunity to state our views in relation to the general practice of heading in newly planted fruit trees, in the following words:—

"We were entirely opposed to heading in newly transplanted trees; we had not done so for many years, and, after careful observation, we had become convinced that trees removed and not headed in the *same year* had done far better than those that were."

These remarks were made from our own experience. We cannot recollect that we ever read any gardening author who did not recommend heading in immediately after planting. Our views were opposed by several cultivators, and the general sense of the meeting appeared to be that trees should be cut in the first year.

Maintaining, therefore, views so different from many of our friends, it gives us great pleasure to offer the opinion of a distinguished French cultivator upon this question, (as translated in the *Gardener's Chronicle,* of October last,) in which it will be seen we are sustained in everything we advanced. The article throughout is almost a repetition of what we stated, only more in detail, as will be seen by referring to them, at the page above given.

It is gratifying to us to have such a confirmation of our practice as that afforded by the writer of the annexed paper; and as the season is at hand when the operations of transplanting and pruning will begin in earnest, we commend it to the careful attention of all who are making plantations of trees.—Ed.

Of late years many amateurs and gardeners have adopted the method of not pruning fruit trees during the same year in which they are planted, thinking that by leaving them entire the trees will take better root, and produce more vigorous shoots. Some are in favor of this system, others are opposed to it, yet the comparative merit of the proceeding itself is little known, and in general the public is not informed of the good or bad consequences of its adoption, no one to my knowledge having published the results of experiments made with regard to this subject.

The *Revue Horticole* has treated on this question at some length, in an article more theoretical than practical. The writer, relying on the principles of vegetable physiology, concludes that the young fruit tree should not be entirely cut back at the time it is planted, but that nevertheless all its branches should not be retained; that the removal of the young trees having shortened the roots, part of the branches should also be taken off, in order to reëstablish an equilibrium.

I intend giving some details on this mode of planting, and on the effects of the first pruning, such as I observed at a nurseryman's at Montignon.

Young apple and pear trees, especially the latter, when they come from the nurseries, are, for the most part, without branches lower than 20 inches from the ground; or, if they have any, they are weak or badly-formed twigs, and not bearing a proper relation to the vigor of the upper branches. They have been once pruned to the length of 4 inches; but, not having been well trained in their youth, they take their natural tendency, which is to grow almost vertically, forming an acute angle with the stem. Those who wish to form a well-shaped tree *en pyramide*, or *en palmette* (horizontally trained), with a stock prepared in this way, are obliged to cut off the lower branches, as these are no longer sufficiently flexible to take the desired direction; for, in a properly-formed pyramid, the branches forming the first tier should extend horizontally from the stem. This is, doubtless, the reason why we feel the necessity of pruning on another principle. As, in the ordinary mode, the trees remain about 15 months in the same state as they were planted, they require no particular attention, but a mulching of litter in spring is always beneficial. Towards the month of March, twelvemonths or about 15 months after planting the tree, the latter is not pruned in the usual way, but all its branches are cut off almost close to the trunk, which is itself cut down to the height of 12 or 14 inches from the ground. The tree in this state appears like a small stake fixed in the earth. Vegetation commences in May, and two, three, and sometimes four eyes break out around the sections where the branches were cut off. When the young shoots from these eyes are 3 or 4 inches long, five or six of those which are at the best distance, are chosen to form the first tier of branches. The other young shoots are not pinched, but are completely taken off, in order that all the sap may go to the benefit of those retained, as well as to increase the growth of the leading shoot of the stem. The young branches are kept tied all the summer in the direction they are intended to take. A rod a foot longer than the stem is fastened to it, and serves to keep it in a vertical direction while growing, which is essential to the proper formation of the tree. About the month of August it becomes necessary to pinch the branches that have a tendency to grow too strong, with the view of strengthening the weaker ones, or even the stem itself. This is the way in which I treated this year 500 pear trees grafted on quince stocks intended to be formed into pyramids, and the same number of paradise stocks; both kinds were planted in November, 1850. At the time I write, the result is very satisfactory. All the trees have not grown equally well; in whatever mode trees are grown, there are always some which make less vigorous shoots than others, but in this case the majority have made fine, healthy, vigorous shoots, from 16 inches to 3 feet in length, and even more; they are regularly placed round the stem, following nearly a horizontal direction, and are without knots or wounds resulting from former prunings. I can now prune these branches as well as the upright leader, to 10 or 12 inches in length.

It is objected against this system, that it involves the delay of a year. This is, doubtless, the case in the starting of the young tree; but if we calculate on the first four years, I am convinced that it is fully compensated. In the subsequent management of the trees, we lose no time in trying to divert the sap from the upper branches into the lower, or in making annular incisions in order to cause dormant eyes to start. Attention is chiefly necessary to maintain a balance between the parts of the tree by means of pinching the shoots that are growing too vigorously, and by encouraging those that are weak. A tree thus managed, may fruit in the fourth year. For instance, a pear tree planted in the autumn of 1850, and pruned in March, 1852, would have formed its wood branches in the summer of that same year, 1852. Being cut back in March, 1853, to 10 or 12 inches in length, the tree would, in the following summer, form its fruit buds at the base of the branches, and might bear its first fruit in 1854.

In the ordinary method the fruit shows itself earlier, but of what importance can the fruit of the first four years be? Is four years too long a time to wait when we wish to establish a good tree, capable of bearing for 20 or 30 years? One who is really an amateur, will not regard this delay when he can obtain well-formed and vigorous trees which will afford him satisfaction, and amply remunerate him for time supposed to have been lost.

The author of the article which I have previously quoted, affirms that a tree should not be completely cut back at the time of planting. I can support his opinion by a fact. The trees of which I have just spoken, were planted by my predecessor, one not very favorable to the new mode of operation. He pruned here and there 25 pear trees; these attracted my attention when I arrived. I immediately thought that they might be made subjects of experiment. I cut off the branches of these trees close to the stem, and headed back the stem itself to 2 feet high. I obtained some shoots a foot long, but at the following pruning I could make no use of them, for the stems having been pruned too high, and shoots having only pushed immediately below the sections, the lower parts remained naked. But it is more especially on the roots of trees that the effects of this immediate pruning with reference to planting, was remarkable. This I had the opportunity of observing. A change which I made last winter obliged me to lift a row of 22 trees, four of which had been pruned. I found that the unpruned trees had formed such a mass of fibrous roots, that a tree with its ball was a sufficient load for a man. Two of the four trees pruned when planted had made branches; the two others had only made spurs, and the roots had not progressed at all, not a piece of earth was hanging to them. This fact was witnessed by the proprietor and two workmen, all of whom were greatly astonished. I will here point out another question which appears worthy of investigation. When a tree is planted without being pruned in any way for the first year, it makes but little wood; its eyes produce leaves only; nearly all the buds form for fruit. Nevertheless, when the August sap mounts towards the extremities of the branches, the upper eyes become shoots from 4 to 6 inches long. If instead of leaving them entirely unpruned, when planted, a third or a half of each branch were cut off, the number of eyes being decreased, those nearest the extremities of the parts of the branches left, would produce shoots capable of encouraging the growth of roots. This year I planted 360 pear trees, intended to be grown *en pyramide* and *en palmette*, that is, trained horizontally. I purpose pruning every other one on planting, and leaving the rest unpruned. The following year, that is to say, in March, 1854, they will all undergo the complete cutting back, of which I have spoken above. I earnestly advise amateurs given to the attractive culture of fruit trees, as well as my brother gardeners, to endeavor to settle this interesting question by direct experiment. Nothing would be easier; for there are few gardeners who have not to plant some fruit trees every year. The number of trees experimented on, is of little consequence, provided that care were taken in experimenting. Forty persons making the experiment in different parts of the country, under various conditions of soil and climate, and communicating the results, would enable us to make a conclusive summary of facts and opinions. Two or three years' perseverance in this way, would make known the best mode of operating.

I will mention, in conclusion, that of late years many new forms of training fruit trees, and especially the pear, have been invented. All these forms, the merit of which often consists in their novelty, require much attention and loss of time. And yet, what can be more easily managed, what can be so agreeable to the view, and, at the same time, what so productive, as a well-managed pear tree, *en palmette* or *en pyramide?* Let us endeavor to find a good method of planting; let us improve our practice in pruning, disbudding, and pinching, and under its old forms the pear tree will yield fine fruit in abundance.

Art. V. *Pomological Gossip.*

New Pears. Quite a number of new pears have been introduced to the French and Belgian catalogues the last year or two, a large part of which are probably unknown to most of our pomological readers. That they may become acquainted with their qualities, we give the following list of them, and the descriptions which accompany them in the catalogues.

Abbe Mongen, (Tourres.)—Fruit first quality; immensely large, weighing 42 ounces; recommended by Mr. Tourres as a delicious fruit. March and April.

Amand Bivort, (Bivort.)—First quality; fruit medium size, melting, exquisite. November.

Beurré Antoinette, (Bivort.)—First quality; fruit medium size, melting and buttery; tree moderately vigorous and very productive. November.

Beurré Auneniére, (Van Mons.)—First quality; fruit large and melting, tree vigorous. October and November.

Beurré Berckmans.—Fruit medium size, buttery, and exquisite, pyriform shape; flesh very fine, white, melting; juice abundant, sugary, and highly perfumed; tree very vigorous. November and December.

Beurré Emperor Alexander, (Bouvier.)—Described as one of the best pears that exists; tree vigorous and very productive. November and December.

Beurré De Longré, (De Buck.)—Fruit very large, melting, buttery, and agreeably perfumed; tree vigorous and productive. January and February.

Beurré De Launoy.—Raised by the Horticultural Society of Tournay. Fruit shaped like the Beurré Rance, and very melting. February and March.

Beurré Delfosse, (Gregorie.)—Fruit medium size; flesh fine, melting, and buttery; tree very vigorous. December and February.

Buerré Richelieu.—Received from the collection of M. Berckmans, without any other description than that it "was of the first order."

Beurré D'Albret.—Fruit medium size, melting; tree vigorous and very productive. October. [This is undoubtedly the same as the Poire d'Albret of our Magazine.]

Beurré Woronzow, (De Hartwiss.)—Fruit very large, of the first order, very beautiful and good. October and November.

Beurré Haffner, (Liegil.)—Fruit very large, yellow, tinged with red; flavor similar to the Beurré Gris; tree vigorous and adapted to exposed situations, as the wind does not blow the fruit from the tree. It is considered one of the finest pears of the present day. October and November.

Belle Fleurusienne, (Bivort.)—First quality; fruit medium size, flesh fine, half melting, with the flavor of the Passe Colmar. March and April.

Barry, (A. Leroy.)—Fruit medium size, pyriform, irregularly shaped; skin rough, red, spotted on the sunny side, yellowish on the other; flesh white, coarse, tender at the centre, very juicy, sugary and perfumed; a first rate pear. October. Dedicated to Mr. P. Barry, by M. Leroy of Angers.

Comte de Paris, (Bivort.)—Fruit medium size, flesh fine and melting, juice abundant and perfumed. October.

Coloreé d'Aout, (Van Mons.)—Fruit medium size, first quality; flesh fine, melting and agreeably perfumed. August and September.

Catherine Lambré, (Bivort.)—Fruit medium size, first quality, melting, exquisite. October.

De Lamartine, (Bivort.)—Fruit medium size, first quality; flesh melting, tree vigorous and productive. October and November.

Doctor Trousseau, (Bivort.)—Fruit medium size, flesh fine and melting; juice abundant, sugary, perfumed; tree vigorous. November and December.

Duc de Brabant, (Millet.)—Fruit medium size, first quality; flesh melting, tree vigorous. May and June.

Doyenné Downing, (A. Leroy.)—Fruit medium size, roundish, irregular; skin yellowish green; flesh white, crisp, juicy, sugary and vinous. September.

Duc d' Orleans, (Bivort.)—Fruit large, melting. November and December.

Duchess Helene d' Orleans, (Bivort.)—Fruit medium size, first quality; flesh melting, exquisite. October and November.

Frederic Le Clerc, (Berckmans.)—Fruit medium size, first quality; flesh melting, tree vigorous. November.

Hovey, (A. Leroy.)—Fruit medium size, resembling the Capiaumont; skin, yellow; flesh yellow, melting, juicy, sugary, perfumed and vinous. This fine pear M. Leroy states in his catalogue, he dedicates to us. We return him our thanks for this mark of his friendship. We hope it may prove to be a valuable variety.

Leochine de Printemps, (Hartwiss.)—A very beautiful and good fruit, resembling the Doyenné. Very late.

Leopold 1*st, (Bivort.)*—Fruit medium to large, flesh fine, melting, exquisite, tree vigorous. December and January.

Marié Parent.—Fruit large, melting, exquisite. One of the best pears of its season. September and October.

Poire Jules, (Bivort.)—Fruit large, flesh fine, very melting; juice abundant, sugary, and perfumed. December to April.

Reine des Precoces, (Van Dooren.)—Fruit small, first quality; flesh half melting, very sugary. July.

S. Dotheé Royale Nouvelle.—First quality, half melting; a magnificent fruit, which obtained the first prize in 1848 at the exposition of Tournay. October.

Triumph de la Pomologie.—Magnificent and excellent; fruit very melting. December.

Vineuse d'Esperin, (Esperin.)—Fruit exquisite; flesh fine, white, very melting; juice vinous, abundant, sweet; tree with a wild habit, but it is believed to be one of the finest acquisitions of the late Major Esperin. September.

ART. VI. *Floricultural and Botanical Notices of New and Beautiful Plants, figured in Foreign Periodicals; with descriptions of those introduced to, or originated in, American Collections.*

TREES AND SHRUBS OF CALIFORNIA.—The following descriptive notice of some of the finer shrubs of California, is by Dr. Kellogg, a resident Botanist, who appears familiar with the Flora of that region. Some of them are undoubtedly too tender for the latitude of 42° North, but they will all thrive South of Philadelphia. The Mahonias, and Photinia are already common in our collections, and the *L*aúrus regàlis was introduced by Wm. R. Prince; *R*ùbus nutkànus is also in some nurseries; the others will be mostly new to our gardens:—

As this is the season for transplanting trees and shrubs, we present a list of those much esteemed for their beauty and lasting verdure. Quite a number have been described at length in previous numbers of the *Pacific*, to which we refer. Most of them are now growing within the limits of San Francisco, and may be found generally throughout the State.

LAUREL, or California Sassafras, the *Laurus regia* or *Oradaphne*, an evergreen of great beauty and fragrance, found along ravines.

MYRTLE, or *Myrica californica* or *purpurea*, called also California Bayberry, an evergreen of dense and fragrant foliage in elegant tufts, of most pleasing verdure—nothing can surpass it.

MADRONA, or *Arbutus procera.* Its evergreen foliage resembles the Magnolia; bark most beautiful, and fruit in scarlet clusters, large, sweet and edible; very ornamental.

LAUREL HAWTHORN, or *Photinia arbutifolia.* This is the splendid evergreen shrub or tree we see so common on our sand hills, loaded with large clusters of smaller scarlet berries than the preceding, shaped like those of the wintergreen (*Gautheria P.*) of childhood's memory. The foliage is not so pleasing to the eyes of some, but, together with its fruit, it has singular beauty. Thrives well in poor dry sand heaps.

TEA TREE, or Wild Lilac, *Ceanothus thyrsiflorus.* This is one of our handsomest evergreens when clothed in its fragrant flowers; it is found to bloom in greater beauty and profusion by culture. There are fourteen native species, all of surpassing beauty. They abound in the vicinity of Monterey.

HOLLY-LEAF CHERRY, or *Cerasus illicifolius.* This is a beautiful evergreen worthy of our attention.

WILD CURRANT, or *Ribes glutinosum.* A shrub from eight to fifteen feet high, dressed in the gayest little plumes of pink pendant and nodding flowers, with roundish and scalloped leaves like a geranium. Of these there are several species, all very ornamental.

FLOWERING RASPBERRY, or *Rubus nutkanus.* This has already, like the preceding, attracted attention.

OAKS, e. g. Prickly leaf or Holly-leaf Oak. *Quercus californicus.* To one who has seen them at Contra Costa, or in favorable localities, they need no eulogies. We also recommend the Long-acorn oak, or Q. *longiglandis.* There are *ten* species in California, some of rare beauty.

BUCK-EYE, or horse chestnut, a species of *Æsculus*, subgenus *Pavia californica*, a beautiful deciduous tree, both as respects the flowers and foliage.

OLIVE LEAF BUCKTHORN, or *Rhamnus oleifolus*, an evergreen. This forms a dense green head in everbearing fruit and flower, in all stages to its ripe and black cherry-like berry. Thrives in sand as well as moist loam—four species.

GOLDEN LUPIN, or *Lupinus macrocarpus.* The largest of the genus, and may well be called the tree Lupin. We never see it without an ecstacy of delight, which we are fain to repress, that we may pass for a sane individual in this chilling age of avarice. The foliage with us is evergreen—radiated, delicately silky, so tremblingly alive, it reminds one of an infant's hand; its fragrant golden flowers are almost perennial; we would caress the dear neglected beauty, were it alive to the heart's affection. Unnumbered varieties adorn our path on every side. Fond of sandy soils.

WILD BOX, or Groundsel shrub, *Bacharis californica.* In the vicinity of the New Cemetery, specimens of this may be seen, which, for beauty of shape, in natural regular tufts, no knight of the pruning shears ever excelled. For borders of walks, this evergreen is wonderfully well adapted. Can any one account for the strange neglect towards this native gift.

POPLAR, or Cotton woods, the genus *Populus.* There are several species, very rapid of growth, and agreeable to the eye; their rustling foliage is associated with the crystal fountain, the refreshing shade, and gently cooling breeze.

Balm of Gilead, a species of the above, with gummy buds in the spring time, and fragrant with a new life-inspiring odor, emitting a sphere of health and comfort around it. This species, growing wild and neglected in this city, is one of great interest, both rare and singular.

Twin Berry, or *Xylosteum involucrata.* Although naturally deciduous, this tree or shrub, with us, is in foliage, flower and fruit the whole year round. The little tubulous yellow floral twins, with blushing cheeks, stand side by side, followed by the twin berries, both objects of interest. Were they transplanted, it would call around the rural cottage its natural companions, the humming birds. One of these, a foot or more in diameter, can be seen at the Presidio.

Barberry Bush, or *Berberis aquifolium*, also *nervosa.* These have been mistaken for the holly, by some, and sold in our markets under a similar impression; they are evergreen, and the compound or pinnate character of the leaf, deep yellow root and wood, which latter in the holly are *white*, readily mark the difference, if their dwarfish habit were not sufficient. This is called, also, in some parts, "Oregon Grape." The fruit is excellent for tarts, pies, &c., abounds on the western slopes of the Sierra among the pines, and may be seen on the hills in this vicinity.

California Chestnut, *Castanea chrysophilla?* A small dwarfish specimen of the genus, of singular density of foliage and interesting novelty.

California Walnut, or a species of *Juglans*, is another of useful and interesting culture.

To these there are several species of the *Spiræa* or steeple bush, meadow sweet, &c.

The *Nuttallia*, or Mock Plum, is a shrub of singular interest found in the city; also the Southern Wood, a species of the *Absinthia*, (Cal.,) very fragrant.

[Several of these are described and beautifully figured in Nuttall's *Sylvia*, supplementary to Michaux's.—Ed.]

REVIEWS.

Art. 1. *Elliott's Fruit Book; or the American Fruit Grower's Guide, in Orchard and Garden, &c.* By F. R. Elliott. 1 vol. 12mo., 503 pages. New York, 1854.

Mr. Elliott's Fruit book has been announced as in preparation for a long time, but unexpected delays have prevented its earlier appearance. It now comes before the pomological world—already tolerably supplied with the information on which it treats—for a share of its attention.

When Mr. Elliott first announced his work, it was, as we understood, intended especially as a *Western* Fruit book, for the guide of the enthusiastic cultivators of the great West, and to give to those of the East some correct account of the many valuable fruits of that fertile region, as yet mostly undescribed and unknown. This was untrodden ground, which Mr. Elliott, with his familiarity with Western fruits, might have occupied to his advantage. A *Western* Fruit book he could have produced probably better than any one else; but an *American* Fruit book is another thing, requiring great experience to add much to the stock of knowledge already within the reach of cultivators.

A volume, however, as full as the one before us, could not be written without possessing some value; it describes and figures several Western fruits, particularly Dr. Kirtland's seedling cherries, and appears to be entirely adapted to the cultivators of the West, giving general directions upon the treatment of fruit trees, describing and figuring the most prominent, and classifying them for the convenience of those who are not familiar with previous works on the subject. So far we can give the author credit for having produced a very useful volume.

But as a work adapted to the cultivators of the whole country; as one claiming to take a rank equal to those which have preceded it; or even as forming a reliable guide in the nomenclature, classification, and selection of fruits, we cannot very highly commend it. All the information which has resulted from the several meetings of the pomological convention, the author seems to have ignored, and in its place to have given a classification of his own. We must admit that we like such independence; but then it should be coupled with a complete knowledge of all the fruits described, that it might show the thoroughness of his intelligence rather than any want of it.

For instance, the author says in his preface, "the classes adopted in the following pages, corresponding with those of the National Society, have, therefore, seemed to me well adapted to the end in view. There are some varieties now placed in the second class that will undoubtedly, when more *generally known* and distributed, become worthy a place in the first class; but those now placed in the third class I feel confident will never advance from their present position."

But he has not adhered to this; and that which we think most objectionable in the present volume is its classification. Take apples for instance. Among those in Class I, *adapted to general cultivation*, we find the Belmont, Bethlehemite, Challenge, Fort Miami Melting, Philips's Sweeting, Richmond, Rome Beauty, &c., all natives of the West, and not known probably out of Ohio; while in the second class, among those *worthy further trial*, we have the Benoni, Fall Harvey, Hawley, Jewett's Red, Lyscom, Mother, Minister, Northern Sweet, Pumpkin Sweet, Primate, Sops of Wine, St. Lawrence, &c., well known in New England as among our fine apples, certainly needing no *further* trial than they have already had.

So of cherries. Dr. Kirtland's seedlings are among the sorts worthy of *general* cultivation. We have no doubt they will prove so; but would it not have been as well to have put them into the list for trial, when they have scarcely fruited out of his single collection? Or, at least, to have inserted with them the Graffion, Black Eagle, Downton, Florence, May Duke, Napoleon Bigarreau, Waterloo, &c.,—varieties now upwards of fifty years in cultivation? certainly long enough not to be "*new and untested.*"

We might show the same thing in regard to plums, pears, peaches, &c., but we only note the strawberries. The only kinds named as worthy of *general* cultivation are Burr's New Pine, Western Queen, Longworth's Prolific, McAvoy's Superior, Jenney's Seedling, and Prolific Hautbois! A great list certainly; with the exception of the first and two last, all having originated from seed since the author began his book! Those worthy of "*further attention*" are Boston Pine, Genesee, Hovey's Seedling, Large Early Scarlet, &c., &c., old sorts, in cultivation twenty years and upwards throughout the United States! Four years ago (1850) the American Pomological Convention voted three of the last list to be the only varieties worthy of *general* cultivation.

But we need not copy farther to show the system of classification adopted by the author, which, as we said in the commencement, might do for the West, but not for the advanced state of pomological science in the East.

Mr. Elliott has also taken upon himself the task to popularize the names of fruits. Thus, the White Doyenné is called the White Dean, the Doyenné d'Ete the Summer Dean, &c., thus adding additional synonyms, for he must be well aware such names will never be adopted.

Saving these errors, the volume is a desirable addition to our stock of pomological knowledge, and as giving the best account of Western fruits, very useful to cultivators generally.

MISCELLANEOUS INTELLIGENCE.

Art. I. *Domestic Notices.*

The General Hand Plum.—Having noticed your remarks on this Plum, I have simply to say that if you will refer to our Catalogue of Fruits, &c., published in 1844, for the years 1844–5, you will there find it described as a yellow fruit of largest size, and first quality, ripening in September. It may have been inserted in the previous edition of our Catalogue, but I have none at hand for reference. We received it from Messrs. Sinclair &

Corse, and have now the original tree received from them.—Wm. R. Prince, *Flushing*, *April* 10, 1854.

The Giant Taxodium of California.—Your note in relation to this tree was duly received. I can only say, that to talk of naming that Taxodium "Wellingtonia" at this late day, as if it was a new discovery, is utterly ridiculous. I, with a party of twelve others, ascended the Stanislaus in June, 1849,—and there were, besides ourselves, some thousands of Americans who saw the splendid tree referred to, during that year, and it is found growing extensively in the immense belt of forest trees as you ascend to the great central ridge of the Sierra Nevada. The usual size of large trees of this Taxodium was twenty-four feet in circumference, but occasionally we found them thirty-six feet in circumference; and one we met with, more especially large and grand, we christened "*The King of Trees.*" This gigantic species has been confused by many with the Taxòdium pinnàtum, so plenty at Monterey, and even with the Taxòdium sempervìrens; and I notice it has been called by some "Sequòia gigántea." I have no time to go more into detail at present, and I will now simply remark further, that if this tree is really a genus distinct from Taxodium, we should, in selecting its title, adopt the name of that man, who more than all others deserves the homage of his race, our beloved Washington; and, last of all, should we have recourse to the name of a man, who was devoid of all the prominent traits of bold and daring generalship, but pursued the skulking Fabian policy in the Peninsula, and was thoroughly beaten by Napoleon, with inferior forces, and was only saved from annihilation by the Prussians, and the treachery of a French General. I am, however, of opinion that the tree we have been speaking of and the Taxòdium pinnàtum, so plenty at Monterey and elsewhere, are not sufficiently distinct from established genera, to authorize the formation of a new one. You are probably aware that it is these two species that in California are called Redwood, and that they furnish the mass of long shingling, so universally in use throughout that country. By-the-by, I recall to mind a good joke that occurred during our mountain rambles. A party of us stood one day gazing at some of these lofty trees which appeared to be about 280 or 300 feet in height, and were expressing our astonishment, when a fellow cried out to us, "You need not think much of such saplings as them, for if you go about twenty miles further you will find plenty that are so tall you can't see the tops of them." *Yours very truly*, W. R. Prince.

Musa Cavendishii.—Dear Sir: You mention in your December number that Loudon's Magazine contains some interesting information respecting the fruiting of this plant; as I have not that work, and do not think any one has it in this State, if you could, therefore, find space for it in your Magazine, it would be gratifying to *your obedient serv't*, M. C. Johnson, *Lexington*, *Ky*. [We comply with pleasure with this request.]

"By judicious management in potting and in administering water, a supply of fruit may be had the greater part of the year. I have had at one time ten fruiting plants, nearly of the same size and age, being suckers produced the same spring, and receiving similar treatment; yet no two of them produced their spadix at the same time. And even if they were disposed to do so, it may be prevented, different treatment being given them. As their approach to fruiting is easily known, by their leaves decreasing in size, soon after which the embryo fruit stalk may be detected by the sudden swelling of the lower part of the stem, if more than one should show those indications at one time, the one it is desired to fruit first must have an abundance of water and the warmest situation; and the others be retarded by opposite treatment. The period between them may be still further lengthened a considerable time, if the whole spadix of fruit of one approaching too close upon another, in ripening, be cut off with a portion of the stem attached, when the upper tier of fruit is just ripening, and suspended in a dry and airy room, in the way that late grapes are often kept. I have cut excellent fruit from a spadix two months after it had been separated from the plant; and they may be made to ripen fast or slow in this manner, according to the temperature to which they are exposed. The quicker the flower-stem is made to develop itself, the longer the spadix will be, and the greater quantity of fertile flowers it will produce, consequently the greater weight of fruit, which will vary from 15 lb. to 30 lb. according to the plant's strength, the season, &c. I need hardly add that the soil can scarcely be too rich, and rather light than retentive. JOSEPH PAXTON, *Chatsworth*, 1841." (*Gard. Magazine*, vol. xvii., p. 430.)

ART. II. *Societies.*

AMERICAN POMOLOGICAL.

The President, with the advice of the Executive Committee, has issued the following call for the next meeting in September next:—

The Fifth Session of this National Association will be held at Horticultural Hall, in the City of Boston, Massachusetts, commencing on Wednesday, the thirteenth day of September next, at ten o'clock, A. M.

It is intended to make this assemblage one of the most interesting that has ever been held in this country, on the subject of Pomology. All Horticultural, Agricultural, and other kindred Associations, of North America, are therefore requested to send such number of Delegates to this Convention, as they may deem expedient.

Pomologists, Nurserymen, and all others interested in the cultivation of good Fruit, are also invited to attend the coming session.

Among the objects of this Society are the following:—

To ascertain, from practical experience, the relative value of varieties in different parts of our widely extended country. To hear the Reports of the various State Fruit Committees, and from a comparison of results, to learn what Fruits are adapted to general cultivation; what varieties are suitable for particular localities; what new varieties give promise of being worthy of dissemination; and especially, what varieties are generally inferior or worthless, in all parts of the Union.

In order to facilitate these objects, and to collect and diffuse a knowledge of researches and discoveries in the science of Pomology, Members and Delegates are requested to contribute specimens of the Fruits of their respective districts; also papers descriptive of their art of cultivation; of diseases and insects injurious to vegetation; of remedies for the same, and whatever may add to the interest and utility of the Association.

The Massachusetts Horticultural Society has generously offered to provide accommodations for the Society, and also to publish its proceedings free of expense.

All packages of Fruit intended for exhibition, may therefore be addressed as follows:—"*For the American Pomological Society*, Horticultural Hall, School Street, Boston, Mass.;" where a Committee will be in attendance to take charge of the same.

All Societies to be represented, will please forward Certificates of their several Delegations, to the President of the American Pomological Society, at Boston. M. P. Wilder, *President.* H. W. S. Cleveland, *Secretary. Boston, Mass.*, April 1, 1854.

PENNSYLVANIA HORTICULTURAL.

The Strawberry Question. Mr. C. M. Hovey,—Dear Sir;—I was surprised to read in your Magazine this day, a paper on the "Strawberry Question," purporting to be part of the "Proceedings of the Pennsylvania Horticultural Society." I was not present at the meeting you allude to, but heard nothing of the kind of your pretended proceedings read in the minutes at the next meeting. I believe something of the kind was proposed by a member of the Fruit Committee, but was *rejected* by the Society. The party, therefore, who forwarded you the paper as the adopted opinions of the Pennsylvania Horticultural Society, has practised a fraud on you, and an injustice on me, which I am sure your love of fair play will lead you to correct. However much the results of your experiments and my own may lead us to differ in opinion on the subject in dispute, you will, I am convinced, accord to me the privilege of preventing those gentlemen who seek to get the "pound of flesh" they imagine I have forfeited, from stealing at the same time some of my "blood" also. Very respectfully, Thomas Meehan, *Germantown, Pa., April* 10, 1854.

[We gladly insert the above from our correspondent Mr. Meehan, though we must confess we are somewhat surprised at its contents. Our account of the proceedings of the Society was sent to us in a *printed* sheet from the same source we have always had them, (Dr. Brinckle, we believe, or the Secretary, Dr. James,) and, we presume, were actually the doings of the Fruit Committee. It certainly is of no consequence whatever, whether the Society accepted of the committee's report or not, as long as it contained their views. It is to them that the public look for valuable information, chosen as they are for the especial object of reporting upon fruits, &c.; with a gentleman so well known as Dr. Brinckle at its head, the public can judge of the value of the reports. If the Society repudiates *one* report it might just as well repudiate all. The opinion of the Committee is all that is wanted, and, it strikes us, as highly disrespectful to its members to attempt to reject their doings.—Ed.]

Art. III. *Massachusetts Horticultural Society.*

Saturday, April 1st, 1854.—The stated quarterly meeting of the Society was held to-day—the President in the chair.

The President read a communication relative to the purchase of the Society's property, which was referred to the executive committee.

On motion of R. M. Copeland, a committee of three, consisting of R. M. Copeland, W. S. King, and A. Bowditch, was appointed to make a report upon the practice of Scraping Trees.

Mr. W. S. King moved that a committee be appointed to inquire into the doings of the fruit committee for 1853. W. S. King, S. Walker, and A. Bowditch, were appointed the committee.

Adjourned one fortnight, to April 15th.

April 15th.—Adjourned meeting—the President in the chair.

R. M. Copeland, from the committee for that purpose, read a Report on Scraping Trees, which was ordered to be printed for the use of the members. Several letters were laid upon the table from the Corresponding Secretary. T. M. Kenney, Wareham, was admitted a member.

Adjourned to Saturday, May 6th.

HORTICULTURAL OPERATIONS

FOR MAY.

FRUIT DEPARTMENT.

The month of April has been an unusually cool and stormy month, with two snow storms on the 15th and 17th, when six or eight inches fell, and in some places to the depth of two feet. The frost was not out of the ground in many places on the 25th, which is about one month later than in 1853. Work has been greatly retarded, and the season is full two weeks later than the previous year.

Grape Vines in the forcing houses will now be fully ripe, and ready for cutting. The vines will need but little attention for a while; keep the laterals pinched in and give air freely after the grapes are cut, to ripen off and mature the wood. Vines in the greenhouse will now be setting their fruit, and will require more care; keep the laterals pruned in; towards the last of the month the berries will require thinning; maintain an even temperature, and damp down the house morning, noon and night, in fine weather; manure and fork the border carefully. Vines in cold houses will now be pushing vigorously, and will be in bloom towards the last of the month; guard against changes of temperature, and syringe freely in fine weather, till the buds begin to open.

PEACH TREES in pots will now be swelling their fruit rapidly, and should be liberally watered, using occasionally liquid manure or guano. Keep down the red spider if they make their appearance.

FIGS introduced into the cold grapery now, will produce good crops of fruit.

STRAWBERRY BEDS should be dressed and put in order now; owing to the cold weather, they have not probably been uncovered before the middle of April. Employ the first opportunity to dig between the rows, first manuring the ground liberally. New beds may be made this month.

FRUIT TREES.—Owing to the late spring, planting may now be done with perfect safety.

GRAFTING.—Having finished the cherries and plums, proceed now with the pears, apples, &c.

PRUNING trees may be continued as leisure occurs. Head in all straggling shoots, and cut in the new wood according to the strength and vigor of the trees.

FLOWER DEPARTMENT.

The late April has greatly retarded the operations in this department. Owing to heavy snows and severe frosts, the usual housing in frames, generally commenced early in the month, had to be abandoned until nearly the latter part of it. In consequence of this, the houses have been overcrowded, and bedding plants have become drawn up for want of abundant light and plenty of air. As May comes in there will be more to do to get everything in proper order.

Propagating being best done in the cooler months, it is of little use to continue it, only where there is the convenience of hand glasses, or close pits or frames. What is done without them will cost more than the labor of raising. It will be best to get the stock forward in a hardy state, inuring all to cool nights by degrees, so that they will not suffer in their first removal to the open ground.

CAMELLIAS will be growing away finely now, and only need the free use of a syringe to give them a healthy, vigorous and fine growth. Repotting may be done now, where they have not begun to grow, if there is plenty of time to attend to it.

AZALEAS now going out of bloom may be repotted if they require it, or it may be delayed till after they have completed their growth in July. Syringe freely and water liberally; pinch off all long and straggling new shoots, and head in the old wood, if necessary, to make fine plants.

PELARGONIUMS will now begin to bloom; air abundantly and water more freely; turn round the plants often to keep them from being one sided.

Heaths and Epacrises, that require it, should now be repotted, so as to get established before hot weather. Get them out of the houses into cold frames as speedily as possible.

Chinese Primroses should now be placed out in frames, partially shaded from the hot sun.

Achimenes and Gloxinias should now be shifted for the last time into their blooming pots; keep in a rather close, half shady and warm part of the house.

Begonias should now have a shift into larger pots.

Cinerarias done flowering should now have protection from the hot sun in a cold frame; cut down the old flower stalks.

Orange and Lemon trees should be repotted.

Cyclamens may now be removed to a cold frame.

Monthly Carnations may now be set out in the open ground, where they will bloom all summer.

Plants of a half hardy character may be removed to cold frames, where many of them do better than if kept in the greenhouse till the time of turning out the whole stock.

FLOWER GARDEN AND SHRUBBERY.

The cold weather of April has greatly retarded the work in this department, and but little could be done until the present time. The labor will therefore be all the more urgent, unless it should continue cool. Proceed with the digging of the borders and flower beds, level and roll the walks, and dress the lawn; go on with all planting as speedily as possible.

Tulips and other spring bulbs will be coming forward rapidly, and the beds should be neatly cleaned before they come into bloom.

Carnations and Picotees should be planted out in good season, in order that they may get well established.

Herbaceous Plants of all kinds may now be transplanted safely.

Pansies wintered in pots may now be set out in well prepared beds. Sow seeds for a succession.

Gladioluses, Tiger Flowers, and similar bulbs, may now be planted out in beds or in the flower borders.

Dahlias may be planted out the last of the month.

Hardy Annuals may now be sown, and such kinds as were forwarded in the hot-bed may now be hardened off for planting in the open ground.

VEGETABLE DEPARTMENT.

The untoward weather has been severe upon all kinds of early planted seeds, and where they have failed, another sowing should be got in as early as possible.

Tomatoes, Cauliflowers, &c., in frames, should be hardened off by giving an abundance of air, and wholly removing the sashes in fine weather.

Cucumbers, Melons, &c., may be planted now in the open ground.

Cucumbers in hot-beds should still have a good bottom heat; give them a new lining to keep up the temperature; make new beds if more vines are wanted.

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OF

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ORIGINAL COMMUNICATIONS.

Art. I. *The Production of Plants by Hybridization.*

In one of the early volumes of our Magazine, (III, p. 97,) we penned some remarks on the growth of new varieties of plants by hybridization. Since then, now nearly twenty years, we have produced thousands of various kinds, by this process, and have observed attentively the changes which have taken place, and the characteristics peculiar to each. We have noted down the similarity to, or dissimilarity from, the parents from which they have been produced, and have, as we think, obtained some facts which enable us to proceed with more certainty in the growth of improved kinds. What we stated, however, in the volume referred to, is substantially what we should say now, were we to discuss at length the subject again. Our object at this time is to introduce to the attention of amateurs who are interested in the hybridization of plants, the views of a cultivator which we find in MacIntosh's *Book of the Garden*, now issuing in numbers from the press.

We are but just beginning to appreciate the importance of this art in the production of new varieties, both of fruits and flowers; very few among our cultivators have attempted the work carefully and scientifically, and therefore we have few or no reliable experiments to refer to. But we know this, that the chance seedlings which spring up in every garden, often prove much superior to the parents in the near vicinity; and such being the fact, why should not judicious hybridization, done with a view to produce certain results, accomplish all and much more than nature, left to its own caprices?

If every breeze which sweeps over a cornfield planted with various kinds, will so distribute the pollen as to find all colors of the grain in a single ear, should we not see and admit the vast results which may be accomplished by the hand of man, guided by science, in effecting changes in this and other plants? Indeed we have as yet but just begun to learn the great alterations which may be made in certain families of plants,—the highly ornamental character which may be given to others, and the improvement to be effected among our choicest fruits and vegetables. Followed up with attention and perseverance, as certain improvements may be made in fruits and plants, as the same care and perseverance have made improvements in the breeds of cattle. The Diana and Concord grapes are sufficient evidence to show how great are the changes of a single generation of accidental origin; and our seedling strawberries, the Boston Pine and Hovey, are equally good evidence of what thorough and complete hybridization will effect by bringing two ordinary varieties together.

We shall have some experiments to detail hereafter; but now, as the season is approaching when hybridization may be effected, especially among plants, the following remarks on the *modus operandi* of the process will be found exceedingly interesting:—

To those who would attempt the hybridizing or cross-breeding of plants, I will now offer some suggestions for their guidance.

It is an *essential* element to success that the operator be possessed of indomitable *patience, watchfulness, and perseverance.* Having determined on the subjects on which he is to operate, if the plants are in the *open ground*, he will have them put into pots, and removed under glass, so as to escape the accidents of variable temperature—of wind, rain, and dust, and, above all, of insects. A greenhouse fully exposed to the sun is best adapted for the purpose, at least as regards hardy and proper greenhouse plants.

Having got them housed, secure a corner where they are least likely to be visited by bees or other insects. The plants which are to yield the pollen, and the plants which are to bear the seed, should be both kept in the same temperature; but where this cannot be managed, pollen from an outside plant, in *genial* summer weather, may be used, provided it can be got; for there is a class of insects which live exclusively on pollen, and devour it so fast after the pollen vessels open, that, unless the plant is under a hand-glass, (which I would recommend,) it is scarcely possible to get any pollen for the required purpose. To secure against chances of this nature, a sprig with opening bloom may be taken and kept in a vial and water inside, where it will get sufficient sun to ripen the pollen. But here, too, insects must be watched, and destroyed if they intrude. An insect like, but smaller, than the common hive bee, which flits about by fits and starts, on expanded wings, after the manner of the dragon-fly, is the greatest pest, and seems to feed exclusively on pollen. The hive bee, the humble bee, and wasp give the next greatest annoyance. All these may be excluded by netting fixed over apertures from open sashes or the like. Too much care cannot be bestowed on excluding these intruders, whose single touch, in many cases, might neutralise the intended result; for the slightest application of pollen native to the parent plant, is said by physiologists to supersede all foreign agency, unless, perhaps, in the crossing of mere varieties; and the truth of this observation consists with my own experience. Without due precaution now, the labor, anxiety, and watchfulness of years may issue in vexation and disappointment.

As a further precaution still, and to prevent self-fertilization, divest the blooms to be operated on not only of their anthers, but also of their *corollas.* Remove also all contiguous blooms upon the plant, lest the syringe incautiously directed, or some sudden draft of air, convey the native pollen, and anticipate the intended operation. The corolla appears to be the means by which insects are attracted; and though, when it is removed, the honey on which they feed is still present, they seem puzzled or indifferent about collecting it; or if, haply, they should alight on the dismantled flower, (which I never have detected,) the stigma is in most cases safe from their contact.

It will be some days—probably a week or more, if the weather be not sunny—ere the stigma is in a fit condition for fertilization. This is indicated in many families, such as *ericaceæ*, *rosaceæ*, *scrophularineæ*, *aurantiaceæ*, &c., by a viscous exudation in the *sutures* (where these exist) of the stigma, but generally covering the entire surface of that organ. In this condition the stigma may remain many days, during which fertilization may be performed; and this period will be longer or shorter as the weather is sunny, or damp, or overcast.

In certain families, such as the *Malvaceæ*, *Geraniaceæ*, &c., where the stigma divides itself into feathery parts, and where the viscous process is either absent or inappreciable by the eye, the separation of these parts, the bursting of the pollen, the maturity of the stigma, and all which a little experience will detect, indicate the proper time for the operation, sunny or cloudy weather always affecting the duration of the period during which it may be successfully performed.

As to the proper *time* and *season* best adapted for such experiments, a treatise might be written; but here a few remarks must suffice.

As for the *season of the year*, from early spring to midsummer I would account the best period; but, as I have just observed, I regard all cold, damp, cloudy, and ungenial weather as unfavorable. On the other hand, when the weather is *genial*, not so much from sun heat as at times occurs from the atmosphere being moderately charged with electricity, when there is an elasticity, so to speak, in the balmy air, and all nature seems joyous and instinct with life, this, of all others, is the season which the hybridist should improve, and above all if he attempt muling.

The hybridist should be provided with a pocket *lens*, a pair of wire *pincers*, and *various colored silk threads.*

With the *lens* he will observe the maturity of the *pollen* and the condition of the *stigma*, whether the former has attained its *powdery*, and the latter (if such is its nature) its *viscous* condition. If he find both the *pollen* and the *stigma* in a fit state, he will, with the *pincers*, apply an anther with ripened pollen, and by the gentlest touch distribute it very *thinly* over the summit of the stigma. The operation performed, he will mark it by tying round the flower-stalk a bit of that particular colored *silk thread* which he wishes to indicate the particular plant which bore the pollen, and at the same time tie a bit of the same silk round the stem of the latter, which will serve till recorded in a note-book, which should be kept by every one trying experiments on a large scale.

It would be out of place here to give even a general outline of the parts of flowers, to show how these differ the one from the other in various tribes of plants. The experimenter, if he is not a botanist, and even though he is partially acquainted with the science, must, from books and observation, make himself familiar with the various organs, male and female, of each separate family of plants on which he means to work, otherwise he will be often puzzled where to find them, or even to distinguish the one from the other.

As for the *time of the day*, it may be done almost any hour from 9 A. M. till 4 o'clock, P. M., and with equal success. My other avocations have often limited me to earlier and later hours; but I would suggest from ten till two o'clock as the best time of day, always preferring fair, genial and sunny, to chill, damp, or cloudy days.

On recurring to my note-book for 1850, I find a very favorable state of atmosphere occurred in the beginning of March of that year, when I crossed the *Phyllodoce* (*Menziesia*) *cærulea* with the *Rhodothamnus* (*Rhododendron*) *chamæcistus*, sowed on the 18th June that year, as above noticed. At this time, too, I succeeded in crossing the above *rhodothamnus* with a large-leaved, white-flowered Nepal *spe-*

cies of rhododendron, the blooms of which were two inches across the limb. But though I ripened that season three or four pods of this last cross, each pod of seed beautifully ripened, all of which I sowed, I cannot assert that any one seed vegetated; and though it is now nearly three years since the seeds were sown, I still preserve the seed-pot. And I may remark here, from my own experience, that two years is not too soon to despair of vegetation even of seeds from abroad, on which, of course, no cross had been effected.

Few seasons have occurred so favorable for the hybridist as the short interval in the beginning of March, 1850, above alluded to. Singularly enough, happening to visit Lord Rosslyn's gardens at Dysart House, on the 1st of June that year, with the late Professor Dunbar, Mr. M'Intosh, (the author,) and Mr. Sprott, I observed the above *rhodothamnus* marked as crossed. I found it had been crossed at the above period, and with *Rhododendron arboreum!* The seed-pods were then fully swollen, and approaching maturity; but I have not heard that anything has come of them.

It is quite unnecessary to offer any directions as to the results to be effected. If it is desired to reproduce the larger, finer formed, or higher colored bloom of a plant having a tall, straggling, or too robust a growth, or having too large or too coarse foliage in a plant without these drawbacks, I need not suggest to select, in another species of the same family, a plant of an opposite character and properties—say of dwarf, compact growth, handsome foliage, and free flowering habit; and if such can be obtained, work with it, making the latter the seed-bearer. Or, if it be desirable to impart the fragrance of a less handsome kind to another more handsome, I would make the cross upon the latter. I cannot speak with certainty from my own experiments how far perfume may be so communicated; but I have some things far advanced to maturity to test it; and I entertain the hope that fragrance may not only be so imparted, but even heightened, varied and improved. Or if it be desired to transfer all, or any valuable property or quality, from a tender exotic species to a native or hardy kind, work upon the latter; for so far as constitution goes, I agree with those who hold that the female overrules in this particular. I would offer this caution to those who wish to preserve the purity of certain flowers for exhibition, especially those having white grounds, not to cross such with high-colored sorts. I once spoiled a pure *white* bloomed Calceolaria for exhibition, by crossing it with a *crimson* sort; all the blooms on those branches where the operation had been performed, being stained *red*, and not the few flowers merely on which the cross was effected.

In this note, already too long, I cannot further illustrate my remarks, by recorded experiments in the various tribes upon which I have tried my hand; but I cannot leave the subject without inculcating, in the strongest manner, the observance of the rules I have laid down to prevent vexatious disappointments. If any doubts arise about the cross being genuine or effectually secured, let not the seeds be sown. Three, four, five, and even six years, must oftentimes elapse with trees and shrubby things ere the result can be judged of; and if eventually it prove a failure, or even doubtful, it is worse than labor lost, inasmuch as it may mislead. If there is no great departure from the female parent, the issue is to be mistrusted. It is singular, if well accomplished, how much of both parents is blended in the progeny. Gentlemen eminent as physiologists, have read nature's laws in these matters a little differently from what my own humble experience has taught me, and assigned to the progeny the constitution and general aspect of the *one* parent, while they gave the inflorescence and fruit to the *other*. I have crossed and inverted the cross, and can venture to give no evidence on the point, except, perhaps, as to *constitution*, to which the seed-bearer I think contributes most. A well managed hybrid should and will blend both parents into a distinct intermediate, insomuch as to produce often what might pass for a new species. If the leaning be to one more than another, it is probably to the female, though this will not always be the case.

Again, it is asserted that a proper hybrid—*i. e.*, one species which is crossed with another species, which is separate and distinct from it—will produce no fertile seeds. This does not accord with my observations. Dr. Lindley has remarked very justly, (*Theory of Horticulture*, p. 69,) "But facts prove that undoubted hybrids *may* be fertile." My hybrid, *Veronica Balfouriana*, (an intermediate between *V. saxatilis* and *V. fruticolosa*,) seeds, I would say, more abundantly than either parent; and the progeny from its self-sown seeds I find to be of various shades of blue, violet, and red, rising in my garden, some having actually larger, finer, and higher-colored blooms than the parent bearing the seed; and I am familiar with the same result in other things. Yet I am far from asserting fertility in the produce between two members of allied but distinct *genera*—such, for example, as in the *Brianthus*, which I have found to be unproductive, whether employed as the male or female parent. As above conjectured, its parents were far too remote in nature's own arrangement. The hybridist has a field before him ever suggestive of new modes of acting. He may try, as I have done, what may be effected under various tinted glass. My persuasion is, that I effected from a pale yellow a pure *white*-grounded calceolaria, by placing the plants under blue-shaded glass, by which the sun's rays were much subdued. He may also apply chemical solutions to plants with ripening seeds. Nature, in producing, as it sometimes does, plants with blooms of colors opposite to those of the parent, must be governed by some law. Why may not this law be found out? For example, under what influences was the first *white fuchsia*, the *F. Venus Victrix*, produced, the purest yet of all the race, and the source from which all the *whites* have been derived?

While I have necessarily confined the above remarks to things proper to the flower-garden, a wide and still more important field lies beyond. The late lamented Mr. Knight of Downtown, did much in this way to improve our garden fruits and other esculents, and with a success that none else—so far as I am aware—has since attained. Why should not these efforts be extended to the improvement of *agricultural* as well as horticultural productions? Why not carry them into *field* and *forest*, to the creation of new, more useful, and more elegant forms? Nature is boundless, and its objects are endless, and this subject, of all others connected with plants, the most engrossing and exciting. Rich results await the intelligent experimenter; but I would advise none to embark in the pursuit who has not sufficient leisure to devote to it, and, as I said before, who is not possessed of indomitable patience, watchfulness, and perseverance, with a fixed determination not to be fretted or discouraged by *frequent failures*.

Art. II. *On the Picturesque.*

By Wilson Flagg.

In almost all cases, any scene in real life or in real nature produces the same effect upon the mind which would be produced by the same scene in a painting. As painters generally confine themselves to single views, for the attainment of good effects, in like manner it will be found that those scenes in the outward world yield us the most pleasure as objects of sight, which might easily be comprehended within the limits of a piece of canvass. As we proceed beyond such limits we approach more and more to scenes that produce the sensation of grandeur. A still wider prospect is attended with the emotion of sublimity; but just in proportion as this sentiment is awakened do our sensations become too vague to be classed among picturesque effects.

For the purpose of creating good picturesque effects, there must be no more objects represented than the mind can easily comprehend at once. I will illustrate this principle by instancing a company of young persons engaged in rustic amusement. If a few be represented in a small group, under a single tree in the foreground, and behind these a small wood in the distance and in shadow, where several others are congregated, our attention is fixed upon the group under the tree. The scene in the background seems to give notice that the little group under the tree is but a detached portion of the village children. Though the former has engaged our sympathies, our interest is heightened by the sight of the remainder. Were the picture a representation of the whole assemblage in the wood, it would fail in creating the same degree of interest. Our interest in the whole party originates with our sympathies excited by the little detached group under the tree.

Let us imagine a very different scene to illustrate the same principle. We will suppose the painter wishes to represent the horrors of a field of battle, after the battle is over. One who was unacquainted with the true foundations of sympathy in painting, would be apt to crowd as many images of horror into his picture, as the space would admit. No so the skilful artist. He selects a particular affecting incident. He represents a single wounded soldier, attended by all those circumstances which are calculated to awaken our pity. His dead horse lies by his side. A few miserable persons are equally engaged in the attempt to relieve, to succor and to plunder him. The expressions of gratitude and despair blend discordantly in his ghastly face; but some person must be represented in the act of bestowing upon him direct relief, to satisfy our benevolent feelings. Here in the foreground is the scene which is intended to afford us a realizing sense of the horrors of a battle-field. The sight of the wounded soldier excites our pity, by interesting the mind in a particular object. In the background is a confused representation of a multitude of the dying and the dead, just sufficient to afford us a hint that the individual who excited our sympathy is only one sufferer among thousands of others.

If a large number of persons were represented bleeding and dying in the foreground, the spectacle would occasion horror rather than pity. A single object should always be represented, around which our sympathies may cluster. We pity a lonely sick man in a hovel, and would seek opportunity to relieve him; but on visiting a sick hospital, we turn away with general sorrow and despondency. Pity is an agreeable, horror a disagreeable, emotion. A good painter would therefore endeavor to excite the former, and avoid what would excite the latter. No more suffering should be represented than it might seem practicable to relieve; for the moment a suffering object falls into an apparently hopeless condition, our pity becomes painful, because it cannot be assuaged by the hope of effectually exercising our benevolence.

Whoever has ascended Mount Holyoke may recollect two views that would serve, somewhat imperfectly, to illustrate this principle. On the eastern side of the mountain a vast wilderness is before us, spread over what seems to be an almost boundless space. The sensations produced by this view are vague and indefinite, approaching more nearly to a sense of sublimity than anything else. Here is nothing but a wilderness of forest. The only sensation produced by the view which is really distinct, is one of dreariness rendered somewhat cheerful by the greenness of vegetation, the blue sky above and the sunshine around it.

Now let us turn to the opposite side of the mountain. Here is the same unlimited extent of scenery, but the prospect opens into the beautiful valley of the Connecticut River, where there are distinct groups of agreeable objects to awaken our interest and fix our attention. This is the only view which could be called picturesque, though the eastern prospect has more rudeness and wildness. Yet even the western view, on account of its amplitude, is attended with emotions that should be classed under the head of grand, rather than picturesque effects.

When ascending any high hill that commands an extensive view of the surrounding country, we are commonly affected with the most pleasure when beholding some limited prospect, at only a small distance from the foot of the hill. An opening in a wood reveals to the sight a single farm-house, with its outbuildings, its green and yellow fields of tillage, the flocks feeding on the opposite slope, and here and there a human being engaged in some pleasant toil or recreation. Here is a single picture, bounded by woods and hills that serve to yield it still more the appearance of rural happiness. As we continue our ascent, this little farm and cottage soon become an insignificant portion of an almost boundless variety of objects. The attention is now unfixed. The mind rests agreeably upon no particular scene, but is somewhat exhilarated by the grandeur of the whole prospect. There is nothing in it, however, that awakens half the interest produced by the first limited view of the farm and cottage.

The same remarks would apply to paintings. We must not see all on canvass which the painter would present to the mind. The greater part must be filled up by the imagination; and the perfection of the work depends greatly on a proper selection of those points which are the most suggestive. A poet who minutely describes everything he would present to the mind, fatigues and vexes the reader. A few prominent objects should be introduced in such a manner as to suggest the remainder to the imagination. A scene is commonly suggestive in proportion as it is circumscribed. The hollow stick or tin tube, which is often used by spectators when looking at a panorama, or a real scene in nature, is but an awkward means used to circumscribe some particular view, and thereby yield it a picturesque effect.

Dr. Darwin speaks of a print "in which was represented a shrivelled hand, stretched through an iron grate, in the stone floor of a prison yard, to reach at a mess of porridge, which affected him with more horrid ideas of the distress of the prisoner in the dungeon below, than could have been produced perhaps by an exhibition of the whole person." The effect produced by such partial scenes, however, upon the mind of the spectator, must depend greatly upon the keenness of his sensibility, and the liveliness of his imagination. If his heart be cold, or his mind inactive, the parts which are exhibited in the picture might fail to suggest what is left for the imagination to supply.

I have before remarked that humble objects commonly excite the most interest, because their wants afford exercise for the benevolent feelings. In painting or in romance, the most interesting object is the one who innocently suffers the greatest misfortunes; and persons of exalted station can be made objects of interest only by exposure to dangers that threaten them, or by actual misfortune or adversity. A painting that represented a beautiful woman in her parlor, surrounded by the luxuries and elegancies of fashionable life, might attract attention by its artistical merits, but it would have no poetical or picturesque recommendations. We should admire the beauty of the lady, the splendor that surrounds her, and still more the exquisite finish bestowed upon the whole by the artist. But there is no poetry in the feeling of admiration. What we only admire seldom affects the heart. A woman sitting in a desolate condition, on a solitary seashore, with two or three little children leaning around her, watching for an approaching sail, is nothing to admire, but something that powerfully excites our sympathies. From humble life, or from the great reduced to misfortune, the painter and the poet must select all images that will deeply affect the soul.

In an old edition of the "Lady of the Lake," a poem full of picturesque scenes and incidents, the frontispiece represents the heroine of the poem alone in a shallop, near the shore of the lake. The royal hunter having got separated from his companions, and being in a wild and lonely situation by the side of Loch Katrine, blows his bugle. This alarms the maiden, who immediately on perceiving the hunter, pushes her light shallop from the shore. Ellen was a chieftain's daughter, and being represented all alone in a skiff, on the shore of a solitary lake in the forest, and in a situation of some peril from freebooters, she becomes an object of peculiar interest.

In another edition of the same poem, is simply a portrait of Ellen, arrayed like a fine lady, and looking rather pensive as she is watching her lover at a distance, while he is taking his departure. No person could behold this picture with as much interest as the former. Neither her beauty nor her finery can render her an interesting object, while her apparent circumstances are such as all might envy. When she is seen with her oar, in the act of pushing off her shallop, to get out of the reach of the stranger huntsman, she seems to be in peril, and the whole scene is picturesque in proportion to her apparent danger.

I have said that an object is not picturesque that excites only admiration. I alluded, however, to that sort of admiration with which we contemplate the mere splendor of wealth and art. The representation of a person in the act of performing a deed of great heroism and the representation of a work of art that raises one's admiration to the pitch of sublimity, are picturesque in the highest degree. But, in general, the scenes that most delight us in paintings, and the descriptions that most delight us in poetry are the pictures of humble life. Whether it be that we can more readily sympathize with the poor and the humble, or whether, after all, we may not feel that there is more true happiness in a rustic cottage where content resides, than in a gorgeous palace where a constant effort is used to maintain a false dignity, it is certain there is a charm about the pictures of humble life that cannot be transferred to those of wealth and fashion. But the observers of a gallery of paintings are very apt to employ themselves in finding out certain qualities that are difficult of execution, that they may admire the artist for his skill, instead of looking for qualities that would agreeably exercise the sense of beauty in nature, and the finer feelings of the heart.

In the abstract most men admire genius more than mere mechanical skill, but they do not carry their theory into practice. When looking at a painting, they admire the artist more than the man of genius. The genius of a painter is manifested in his power of awakening in the mind of the spectator of his works some deep sympathy, or beautiful and sublime conceptions. The same may be said of the works of a poet, of an architect, or even of the designer of artificial landscape. When one looks for mere exquisite finish in the works of the painter, costly decorations in those of the architect, or neatly gravelled walks, rare trees, shrubs and flowers in the designer of grounds, without reference to the emotions excited in the mind, he places the secondary object of the art in the primary rank. In architecture the mere artist studies effects only so far as they relate to classic propriety, correct proportions, and the neatness of the workmanship.

The man of genius makes all these secondary to the attainment of grand, beautiful or picturesque effects. This remark must not be understood as an attempt to depreciate art. The greatest poets, painters and architects have always united with their genius the skill of the most exquisite artists.

But to return from our digression. In the delineations of humble life there must be a confinement of the design to a few individuals. Crowd together a large number of poor people, who are so interesting in a single cottage, and the scene is no longer picturesque. We can easily identify ourselves with a single family, and easily go along with them in their pleasures, their wants and their sorrows; but we cannot sympathize with a crowd: we cannot follow them in their journey of life; and if we try to do so we turn away with a sense of confusion. The same may be said of historic details. When we read an account of the massacre of St. Bartholomew's, where thousands were murdered at once, we are smitten with a confused and awful sensation of horror. Our sympathies, however, are not powerfully excited. Indeed, I doubt whether a general history of the wars and sufferings of the Poles, and of their exile into Siberia, would awaken our sympathy as powerfully as the simple narrative of Prascovia, the daughter of the exiled Lonpuloff.

Great uniformity and brilliant colors, such as enter into the composition of physical beauty, often mar the picturesque effects of certain scenes. Hence a cottage painted in some neutral tint is more picturesque than one that is of a decided and glaring color; a building that is old and moss-stained than a new house; a ruin than a perfect work. Among persons the old and the very young are more picturesque than the middle aged and youths; the poor than the rich; and the wanderer than the inmate of a dwelling. Something must always be associated with a scene or a picture, that excites some agreeable or affecting sentiment to give it a truly picturesque character. Anything brilliant or magnificent may excite the heartless feeling of admiration—the passion of vulgar minds—but something that awakens an emotion of sublimity, tenderness, melancholy or pity, is required to make an agreeable picture.

It is by the attention paid to these circumstances that Bewick's engravings are distinguished. Many an engraver, since his time, has excelled him in the mechanical execution of his cuts, but none have surpassed him in the felicity of his designs. If he gives you the figure of a bird, he accompanies it with some little scene in the background that awakens in the mind those agreeable emotions we felt in early days, when we first saw the bird in its native haunts. He transports the mind to the very scenes the bird inhabits. He often introduces a head-stone into his pictures, a little island in a lake, or a solitary angler leaning against an old tree by the side of a river.

The genius of the artist is seen in these embellishments, that should always harmonise with the sentiment the artist intends to convey. Every one must have observed the effect of an old tree in heightening the picturesque character of any scene in nature or art. The interest felt in an old tree proceeds from the sentiment inspired by the sight of ruins. It carries us back to an age before we were born. An old man with a staff in his hand, sitting under an old tree, forms an harmonious design. The feelings produced by the sight of the old tree are exalted by the presence of the old man, and put one in mind of a solemn relic of ancient melody, sustained by an agreeable accompaniment. A group of children under the branches of an old tree, forms a suggestive picture. We can easily personify the tree as an aged patriarch, extending his protection over the young persons who are assembled around him. All agreeable scenes become more interesting, when attended by circumstances that invite the mind to make fanciful personifications. Hence the charm which is so apparent in an ingenious emblematical representation, that conveys a correct moral, combined with an agreeable sentiment.

I have already remarked that something of human interest must either be added to or associated with a scene in nature, to render it picturesque. A rude scene is associated with labor and suffering; but to yield it a strong suggestive interest, there should be added to it a little hut, or a stranded vessel, a grave or a monument, or some similar object connected with humanity. The sea itself, without any accompaniments, is not a picturesque object; but it is rendered such, in the highest degree, by a lighthouse upon a rock, or a ship in mid-ocean. But if the ship be exposed to a storm, or the lighthouse be assailed by the dashing spray, they become more picturesque in proportion as the perils to human life connected with them are more apparent. All scenes in nature must be associated with human interest, to afford them that quality which is regarded either as poetical or picturesque.

There is nothing very picturesque in a mere naked representation of the polar ices; but add two graves and headstones to the picture, as they were discovered in the late arctic expedition, and the human interest thus connected with it renders it peculiarly affecting. Even a beautiful landscape in a painting, without some domestic animal, or a cottage, or something suggestive of human life, is cold and uninteresting. In a poetic description of general nature, she is almost always personified in accordance with this principle. We also personify the sun and moon, the months, the seasons, and the hours. This personification of abstract ideas gives them a relation to humanity that causes them to take a stronger hold of the attention.

On this principle we may account for the value of many circumstances introduced into pictures, that might otherwise seem trifling. Of all things in the world, if we had never met with it except in our own sitting-rooms, smoke is the last thing we should be disposed to call picturesque. But as the beauty of all this class of objects is merely relative or suggestive, smoke, when issuing, on a still morning, from the chimney of a cottage, may render the scene more lively and interesting, by suggesting that the cottage is inhabited and that the inmates are stirring within. Hence it is common for painters to embellish their cottages with smoke issuing from one of the chimneys, to give a more lively suggestive power to the scene.

One of Moore's beautiful songs owes much of its popularity, without doubt, to a picturesque allusion to smoke, in the first line of the first stanza:—

> "I knew by the smoke, that so gracefully curled
> Above the green elms, that a cottage was near;
> And I said, if there's peace to be found in the world,
> The heart that is humble might hope for it here."

It is not improbable that the ideas of the whole poem were brought to the author's mind by the sight of smoke gracefully rising from a cottage chimney. Some refer the pleasure excited by a view of smoke to the waving line of beauty. But suppose we saw the smoke of a distillery ascending in this waving line—would any one think of calling it beautiful? There is no intrinsic beauty in smoke. It owes the interest it awakens entirely to association. Even when ascending spirally from the chimney of a rural cottage, I believe it affects the beholder with more pleasure, because it is then suggestive of the perfect serenity of the atmosphere which prevents it from being broken into an irregular mass, rather than on account of the figure it assumes.

On the same principle we may account for the picturesque quality of an urn. There is surely nothing rude about it. It is an object of beautiful shape, without any of that roughness or irregularity which are assumed by Burke and Price as essential to the picturesque. Yet there is not an object in existence that has more of this character than an urn. All this is the result of association, of our knowledge of the ancient custom of urn-burial, and our familiarity with songs and ballads that allude to this custom.

It is a rational taste that causes one to be delighted with an agreeable scene. But paintings are designed more particularly for the dwellers in the city, who wish occasionally to look on nature's works, through this delightful medium. But the poor man who lives in the country, and who has learned to love nature with a poet's affection, and to view her charms with a painter's eye, has resources for the gratification of his taste beyond those possessed by the owner of the proudest collection of paintings in the world, who is confined to the city.

To a boor, nature offers nothing that is picturesque. No object is attractive to him that does not dazzle his eyes, or excite his astonishment. Scenes that would afford a volume of delightful suggestions to a man of cultivated taste and imagination, are to the former a mere blank. To a boor, a rock, or a tree, or a house have no connection with sentiment. If the rock cannot be quarried, if the tree produces no fruit, and the house can no longer afford shelter, they are nothing to him. But to a man of feeling, a house may be the scene of some interesting event in history, or in his own life, awakening the most pleasing recollections; a rock may offer to him a whole page of natural science, and a tree may be an object, under whose classic shade he may look through a long vista of studious recreations.

A knowledge of the influence of the material world upon the mind, as its various powers are affected through the medium of the sight, is the science of picturesque beauty. And it must be evident to all who have given the subject a due degree of consideration, that a general knowledge of these principles would enable the public, when employed in levelling grounds, or cutting down forests, planting trees, building houses, or laying out gardens, to avoid committing errors which might be destructive of the effect it was intended to produce. It is, therefore, by the study of the laws of picturesque effects, that we are taking a step which may materially influence not only our own happiness but that of future generations. If we are ignorant of these laws, we may deface the beauty of our land, and leave a less beautiful inheritance to our children. Understand them well, and every year of labor we bestow upon the face of the country would cause it to bear a nearer resemblance to that better world to which we all aspire.

Art. III. *Pomological Gossip.*

New Fruits. In our last number we gave an account of quite a large number of new pears. Want of space prevented us from completing the list, and also of adding descriptions of other fruits, which we now supply.

NATIVE PEARS.

During the last two years several new varieties have been brought to notice, principally through the exertions of the Pennsylvania Horticultural Society, and they will be found noticed in the reports which have appeared in our pages. But for the convenience of our pomological readers, and for more ready reference, we bring them all together here.

Styre.—Size medium, about two and a half inches long, and two and three quarters broad; form roundish; skin yellowish, with russet specks; stem three quarters of an inch long; calyx small, set in a narrow, moderately deep basin; flesh yellowish white, gritty at the core, buttery and melting; flavor rich and perfumed. September. [This may prove to be Gansell's Bergamot.—Ed.]

Hanover.—Size medium, three inches long by two and five eighths broad; form round obovate; skin green with a brown cheek; stem one inch long; calyx open, set in a furrowed angular basin; seeds large, plump; flesh greenish yellow, exceedingly melting and juicy, with a pleasant flavor. September.

Reigner.—Size medium, two and a half inches long by two and a half in diameter; form obovate; skin yellow, with minute russet dots, and a brilliant carmine cheek; stem three quarters of an inch long; calyx open, set in a broad shallow basin; flesh fine, buttery, and melting, with an exceedingly luscious flavor. October. [Similar to the White Doyenné, but believed to be a seedling.—Ed.]

Diller.—Size below medium; form roundish obovate; skin cinnamon russet; stem one inch long; calyx open, set in a furrowed irregular basin; flesh greenish yellow, exceedingly melting and juicy, with a pleasant flavor. August.

READING.—Called the best winter pear in Reading, Pa., by Mr. Kessler, who kindly sent us scions last year. Size medium, pyriform, tapering to the crown; skin greenish yellow, with russet dots; stem an inch long, slender; basin narrow, shallow; flesh greenish white, abounding in juice of a mild and agreeable flavor. It ripens in January and keeps till April.

WEIST.—Another pear received from Mr. Kessler, "very juicy and fine; ripe in September."

GENERAL TAYLOR.—Size under medium, two and a half inches long by two and a half in diameter; form turbinate, broad at the crown; skin cinnamon russet; stem three quarters of an inch long; calyx partially closed, set in a broad, not very deep, furrowed basin; flesh yellowish white, granular, buttery and melting, gritty at the core, and as high flavored as the Seckel. November. Native of Maryland.

HEWES.—Size medium; form roundish obovate; skin yellow; is a seedling from the White Doyenné, and ripens in September.

CHERRIES.

Quite an addition has been made to the varieties of this excellent fruit by the Belgian cultivators, if the descriptions of those named in the catalogues are correct. It has always appeared to us that there was room for improvement, especially as regards size, and we hope something has been effected in this respect, without the loss of other important qualities of flavor, hardiness, &c., &c. The following are some of the new kinds.

BELLE DE RIBEAUCOURT.—First quality; fruit large or very large, red or dark red. Ripe in July.

D'EUGE'NE FURST, (Liegel.)—First quality; fruit very large, dark red; tree very vigorous and productive. July.

GROSSE DE WAGNELEE.—First quality; fruit very large, yellowish red; very vigorous. July and August.

GRIOTTE DE ST. GILES, (Dej.) Tree of a beautiful habit, very fertile; fruit large, stone small, flesh reddish crimson;

flavor agreeable, slightly acid. Ripe from 15th to 25th July.

DOUCE DE PALATINAT, (Plaelzer.) Fruit very large, of excellent quality; color dark red. July.

TOUPIE, (Henrard.)—Described as a remarkable cherry, raised by M. Denis Henrard, of the University of Saint Walburge, and as having attracted great attention wherever exhibited. The fruit is 28 millemetres long and 20 in diameter, heart shaped. It is pronounced by all who have seen it one of the best of cherries.

BELLE AGATHE, (Thiery.)—A new variety, figured and described by Bivort. Fruit medium size, roundish oval, depressed at the base and summit; skin clear red, marked with deep red. This variety is considered the largest and the best of all the cherries which ripen in October and November, and greatly surpasses the Tardive de Mons or Bigarreau d'Octobre, the only two very late sweet cherries which we possess at the present day.

PEACHES.

So far as peaches have been tried, with few exceptions, our native kinds have proved the best bearers, and hardiest trees. The Grosse Mignonne and Noblesse are excellent, and no doubt other foreign ones will prove equally as good, and the introduction of the finer varieties should not be neglected. The following are highly extolled and are deserving of trial:—

BLANCHE D'EKENHOLM, (B. Ekenholm.)—Fruit of large size, 7 to 8 centimetres in diameter, (about 3 inches.) Fruit yellowish white, lightly marked with carmine rose; flesh whitish yellow, sweet and sugary; flesh parting freely from the stone and skin. End of July.

D'EGYPT, (Michal.)—This variety was long ago introduced into France, but has very recently created quite a sensation there. It appears that, in 1802, a French surgeon, attached to the army in Egypt, brought home a peach which was planted in the garden of M. de Bressieux, in Dauphiné. It was only the last year or two that this active horticulturist, struck with the entirely different aspect of the tree, commenced its propagation.

The qualities which recommend it are the great hardiness of the tree, and its resistance to the maladies which are inherent to the peach in the climate of France ; its easy cultivation as a standard in all aspects, and its fertility at an early age. The fruit is as large as the Têton de Venus, and ripens at the same period.

De Smyrne.—This variety has a most beautiful lanceolated foliage. The fruit is excellent and very large. Its introduction is not only recommended for its fruit, but for the beauty of its foliage.

De Tullias, (Paganon.)—A variety of the Egyptian peach with larger fruit, and appears to surpass the original type.

Drap d'or, (D'Avoine.)—First quality ; fruit large, round ; skin golden yellow ; flesh delicate, sugary and vinous. September.

Monstreuse de Doue'.—Fruit monstrous, weighing nearly 400 grammes, red on the side next the sun ; flesh white ; first quality. Early in September.

Precoce de Chartreuse.—A very hardy peach ; fruit medium size, highly colored ; skin very fine ; flesh delicate, melting, vinous. Early in September.

Souvenir de Java, (Ekenholm.)—Fruit large, six and a half centimetres in height ; skin fine, brilliant purple, and readily detached from the flesh, which is yellowish, melting, sugary, and vinous ; deeply rayed with crimson around the stone. August.

Art. IV. *The Cultivation of Cinerarias.*

The Cineraria is one of the most decorative of our spring-blooming greenhouse plants, flowering for a longer period than almost any other, and forming a rich contrast with the varied plants which make up a collection. Add to this its easy culture, if not neglected in summer, and it may claim a prominent place in every conservatory or greenhouse.

The following article from the *Floricultural Cabinet* is the best we have seen on the growth of this plant; and as the season is at hand when their culture for next year's blooming should begin, we commend it to the careful perusal of all who are desirous of having large, bushy and profuse flowering specimens:—

This early spring-flowering plant is become quite a favorite with all lovers of flowers, and especially with those that require early ones in their greenhouses and conservatories. The almost endless variety of colors, and their easy mode of culture combined, make them still more valuable to those who delight in various colored masses of flowers without the aid of artificial heat. The present month being a very desirable time of the year to procure plants required for exhibiting in the coming spring, or for decorating the greenhouse, &c., I am induced to offer for the perusal of the readers a few hints on their general culture, the soil required, and the best mode of propagating them by seeds and cuttings.

Soil.—The best for them is one third maiden loam, and one third rotten dung, *decayed to mould*, and one third leaf mould, sand, and a sprinkling of yellow loam. The above materials must be well mixed together, and used in as rough a state as possible. The pots should be washed clean before used, as nothing can be more baneful to the health and growth of the plants if this is not duly attended to. Supposing the plants are now of good size, and well filled with roots, they should at once be shifted into larger; and great care should be taken in their various stages of growth that they do not get pot-bound, for directly this is the case the leaves become sickly and pale, and generally the green fly then attacks them, and the plant starts for bloom prematurely. There are certain varieties for *early blooming* that are particularly adapted for it; those varieties of course would suffer by being allowed to get pot-bound, as the blooms of those would be in perfection before such liability from growth or hot weather.

The best place for growing Cinerarias is in a *pit* or *frame*. The height required would be just enough to allow the flower stems to be clear of the sashes when in bloom; as all are aware that the nearer these plants are to the glass the better will be their general appearance and health. At all seasons of their growth, the plants should have all the air possible, *except when the weather is severe, and will not admit of so doing.* In fine mild days in winter, the lights should be taken off, so as to give them the benefit of it to dry up damp, &c., that wet weather will cause to take place. Should the wind be blowing at any time from the east, the lights should be slightly tilted on the side contrary to the direction in which the wind is blowing, as easterly dry winds retard their growth, and cause them to be unhealthy. In the winter, a slight bank of dung should be raised outside the brickwork of the pit or frame, to keep off frost at nights. When the weather is very severe, let a good coating of straw and mats be placed on the top of the lights, as great care must be taken to exclude *all frost*, for the *least frost* destroys these plants. In winter, when frosty weather continues for some time, if the covering is removed from the top of the lights to admit a little sunlight, if only for an hour, it will be found beneficial to the plants, as long confinement in the dark causes them to damp off; but this can in a great measure be subdued, by having the bottom of the frame prepared in the following manner. Supposing, of course, that the ground the frame or pit is on is well drained, and the bottom of the pit level with the walk on the outside, there should be placed about three inches of rough materials, as bricks, crocks, or any other thing to carry away the water quickly; let it be well rammed, to be as solid as possible, and on the top of the same finish off with a slight coat of coal ashes, to form an even surface to place the plants on. This will be found in winter to be quite dry, and of course no damp will arise; and being protected from frost, no other precautions will be found necessary for their safe keeping in winter. If the pit or frame be near a greenhouse, or stove heated with hot water, and where it will be convenient to construct a branch-pipe through the pit, so much the better, as the above precautionary attentions would not be requisite when sufficient heat could be turned on to do the double duty of keeping out frost and damp. Where convenient, I recommend its adoption.

As the plants come in bloom they may be removed to the greenhouse or conservatory, to be kept shaded and have plenty of air; they will then continue in beauty for a long period. When they have done blooming, any variety that it is intended to propagate from should (after seed is saved from it) be placed in a frame in a shady part of the garden, removing about an inch of the top soil to allow some fine fresh soil to be placed around the plant in its stead; this will be found useful for the young offshoots or suckers, as they break up from the bottom. Watering at this point of their culture should be applied very sparingly, or the plant will perish; in fact, what I recommend them to be placed in a frame for, is to preserve them at this time from rain and damp. By keeping them so for a short time, offshoots will be found to break up from the bottom, which must be removed—cutting them off in the fresh mould, and as close to the main stem as possible. They will then be found to strike very free. In preparing the cutting-pot for the reception of these young shoots, let them be well drained with crocks, then some siftings, upon which the same kind of soil as is used for the plants, only sifted finer and a greater quantity of sand in it, upon which, covered with a coat of, say about half an inch thick, to prevent the cuttings from damping off. After inserting the cuttings, give them a slight watering, and when well drained, place the pot under a common hand-glass or frame, and let it be kept close. Very little will be required to be done to them before they are rooted, except shading or removing a dead leaf. Scarcely any water should be given, as the humidity of a close frame is nearly sufficient until well rooted. When they are rooted, put them in small pots and keep them close for a day or two, then give a little air; increase gradually. Whilst the plants are young they require a little extra care, as the mildew is apt to attack them; if so, immediately dust the parts affected with sulphur. Greenfly is the greatest enemy to Cinerarias; thrips, too, sometimes make their appearance, but both may be destroyed by fumigating with tobacco, or syringing over and under with tobacco-water, where fumigating is not easily done. *It will be necessary to fumigate two or three nights in succession, as the first smoking in general only stupefies them*, and the next day they are at work again, and a speedy new progeny soon appears.

In raising seedling Cinerarias, it will be necessary to select a plant as dwarf-growing as possible of each decided color; they should be placed by themselves in a pit or frame, and sow in pots or pans, as follows: Let them be drained, similar to those recommended for cuttings, but on the surface let some fine sandy soil be used, covering the seeds lightly with the same, and in a few days the seedlings will be up. Let them remain in the pan until they are large enough to be handled safely, when they may be potted and treated as before recommended for cuttings. Should any of the seedlings have a tendency to grow tall and rank, let them be destroyed, as they will not have a flower worthy of notice, and the tall growth, too, renders it unsightly.

By pursuing the above method of treatment, I am sure the readers of this article may grow them to perfection. The above mode of treatment is adopted in this nursery, and it is generally known that my respected employers have grown, as well as raised, the finest specimens and varieties in cultivation.

Heretofore we have been indebted to the English cultivators for our fine Cinerarias, but as they are easily raised from seed, and are extremely difficult to introduce from abroad, owing to their succulent character, there is no reason why our cultivators should not grow an abundance of beautiful sorts. Let them be careful in the selection of seeds from the best kinds, and no fear need be entertained of the production of a fine proportion of superior varieties.

The following are a few of the best varieties, excellent for a stock to raise new kinds from:—

Annie, white, deeply tipped with blue; fine.

Bessy, rich deep plum color.

Electra, violet purple, with distinct large eye.
Fairy Queen, white, with edging of rose.
Lady Hume Campbell, white, with blue edging ; fine.
Marginata, rich deep blue ; extra.
Ringleader, deep rosy crimson ; fine.
Rosy Morn, rich bright rose, good form.

ART. V. *Ornamental Arbors, and the Plants suitable for covering them.* By the EDITOR.

IN our hot and sunny climate, covered seats and arbors are almost necessary appendages to every complete garden. They furnish a retreat from the glaring sun, or a place for a cool promenade during the violent heat of a summer's day; and the arbor affords the means of excluding any unpleasant objects, or of uniting one portion of the grounds with another. In England, from the cooler temperature and more cloudy sky, they are not such prominent features in the ornamental gardens of that country; but on the continent, particularly in France, where the climate is more like our own, they are introduced everywhere, and are considered an indispensable part of every country or suburban residence.

Every one who has enjoyed the retreat afforded by a covered seat, after a long walk around even a moderate-sized garden, during the heat of a July sun, will know how to appreciate such a feature; and those who have whiled away a pleasant half hour in the shade of an arbor covered with flowering plants, or clustered with the rich fruit of the vine, will admit that they are pleasant appendages even to a very small garden.

But we presume there is no need of arguing the importance of such structures around our residences; it will be admitted that they may be made both ornamental and useful, and our only object is, therefore, to give a few hints in regard to their introduction in proper places, and to their construction, with a list of some of the plants most suitable for covering them.

Neither covered seats nor arbors are to be introduced anywhere in a garden. Most English writers have condemned them, and for this reason, that they have been placed indiscriminately without reference to their form, the materials of their construction, or their appropriateness to the place. Each of these things must be taken into consideration. An arbor prominently introduced in a large or small garden, laid out in the natural or gardenesque style, would be out of place; it must form an episode in itself; it may connect one portion of the garden with another, being in itself partially secluded by trees and shrubs, or it may, in a small geometrical garden, form a main feature, such as running directly through the centre, or forming wings on two sides. Great care and judgment are required in their introduction in gardens of any extent.

The places where they seem most fitted, are the lines between the kitchen and flower garden or pleasure grounds, thus shutting out the boundary and disguising the extent of the place. Our plan represents one of this kind, (*fig.* 14,) neatly constructed of wire, and covered with running roses, and other climbing plants. It conveys at once the ideas we have endeavored to embody in our remarks, and shows how ornamental such structures may be made.

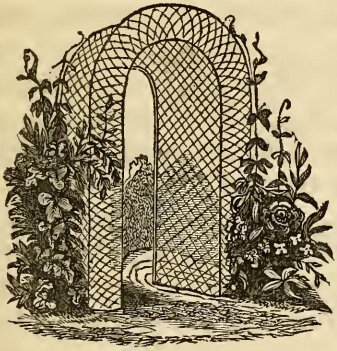

Fig. 14. *Ornamental Arbor.*

The variety of climbing plants suitable for arbors and trellises has been greatly augmented by the introduction of the fine varieties of the prairie rose; heretofore the honeysuckle and one or two other kinds were all that were planted. But with the prairies, Wistaria sinensis, and some of the new clematises, an entire new character is given to the arbor.

The list of this class of plants is now large, and affords every chance for variety and beauty. Of the hardy kinds we may name,

Eighteen or twenty varieties of Prairie roses.
Wistàr*ia* sinénsis and frutéscens.
Honeysuckles, eight or ten kinds.
Celástrus scándens.
Memspérmum canadénse.
Periplòca græ'ca.
Aristolòch*ia* *Sipho*. (Dutchman's pipe.)
Ampelópsis quinquefòlia and bipínnata. (Virginia creepers.)
Bignón*ia* rádicans. (Trumpet flower.)
Clématis flámmula, montàna, &c.
*R*ùbus, bellidiflòrus, and varieties.
Passiflòra cærùlea. (Passion flower.)
Atragène americàna.
*S*mìlax rotundifòlia.
Calystègia pubéscens, and perennial peas.
Common Irish ivy and the Giant, in shaded places.

These form a fine variety, blooming from April to August, are all hardy and easy of cultivation.

The annuals which may be used for covering arbors are,

Cypress vine, red and white.
Convolvulus or Morning glory, of sorts.
Tropæolums, of several varieties.
Maurandyas, of several colors, and Lophospermums.
Hyacinths, and scarlet beans, and sweet peas.

Tender kinds, to be planted out in June, or as soon as the weather is fine and warm:—

Ipomæ'a ficifòlia and Lear*ii*.
Cobæ'*a* scándens.
Ecremocárpus scàber.
*S*olànum jasminoìdes.

From these several lists such a selection may be made, both shrubby and hardy or tender, as will afford a fine display of flowers and ample "drapery" of foliage, the entire summer; and an arbor, judiciously planted, will give sufficient shade from the hottest sun, regale the senses with delightful odor, and please the eye with the variety of colors.

Art. VI. *Floricultural and Botanical Notices of New and Beautiful Plants, figured in Foreign Periodicals; with descriptions of those introduced to, or originated in, American Collections.*

Deutzia gracilis.—This new and lovely little species proves to be perfectly hardy, standing out the past very severe winter without having an inch of its tiny little branches injured in the least, and is now coming into full bloom. It is one of the most valuable acquisitions to our early-flowering plants, and, with the Forsythia, Japan Spiræa, &c., our gardens may be made as gay in the early month of May as later in the year; early and later flowering shrubs are far more desirable than those of the summer season, when we have an abundant supply of flowers.

Viola pyrolæfolia.—One of the most unique of this elegant tribe is now in bloom in our collection, its golden yellow blooms forming a marked contrast with the dark blue native species which at this early season bespangle our fields and hedge rows, and, under garden cultivation, render the flower border gay with the profuseness of their bloom. Its hardiness we have not yet tried, but as it stands the winters in Belgium, we presume it will be hardy, or at least half hardy. It is a fine species, and, for the purpose of obtaining hybrids with our hardy sorts, extremely valuable.

Dielytra spectabilis.—This superb herbaceous plant cannot too often be brought to the notice of all admirers of elegant flowers, at least until it shall have become so common as to be found in every garden. Nothing can be hardier or more easy of cultivation, growing in any soil and throwing up its large and strong stems, clothed with its deeply-cut foliage immediately the frost is out of the ground, and now, May 22d, in full bloom, every branch pendent with one or more racemes of its singular bag-shaped rosy corols. It is without exception the finest herbaceous plant introduced for many years.

New Verbenas.—Many new verbenas are annually introduced into the catalogues, but the chances of raising good ones yearly diminish, as their quality improves. What was once a fine verbena, easily grown from a paper of any ordinary seed, would not now be considered worth growing side of the chosen sorts.

We annex the following brief description of some of the finest new ones of 1853 and 1854:—

Gen. Scott, (Buchanan.)—Flowers and truss very large; color, deep blood scarlet; habit, good.

P. B. Mead, (Buchanan.)—Flowers, rich shaded pink, with deeper centre; truss, good size, habit excellent.

Rainbow, (Gordon.)—Flowers, large, clear deep crimson, shading to violet in the centre; truss, large, and habit good.

Miss Nye, (Hodson's.)—Flowers, large, bright cherry carmine, with yellow eye; truss, large, and good habit.

Robusta, (Davidson's.)—Flowers, large, pale lilac, with deep violet centre; truss, large, and habit good.

Eleonora, (Dennis's.)—Flowers, large, clear rose, with deep crimson centre; truss, large, and habit fine.

Monsieur Bouchage.—Flowers, deep rich ruby crimson; truss, good size, and fine form; blooming abundantly.

Florence, (Hovey's.)—Flowers, large, creamy white, with deep and bold rosy violet centre; truss, circular, full, large and superb; habit, stocky, and a most abundant bloomer. Its trusses of flowers resemble those of the elegant Hòy*a* béllа.

Autumn Sylph, (Hovey's.)—Flowers, large, slightly cupped, pale waxy blush, shaded with delicate pink; truss, large, and finely shaped; habit excellent.

Souvenir, (Hovey's.)—Flowers, unusually large, deep rosy lilac, with violet centre; truss, very large, forming a perfect half globe; habit, stocky, and strong, and a most abundant bloomer.

Blazing Star, (Hovey's.)—Flowers, very large, dark, crimson scarlet, shaded with violet in the centre; truss, very large; habit, remarkably fine, being similar to Orb of Day.

Bride, (Hovey's.)—Flower, good size, pure white, slightly cupped; truss, large, well formed; habit, strong, and extra fine. This is one of the best bedding whites, and flowers so abundantly as to be one sheet of bloom.

Madame Lemounier.—Flowers very large, pale rose, distinctly striped with white, resembling the Van Houtte Phlox. Truss very large, and of fine form; habit strong and excellent. This is the first really superb striped verbena that has been produced; it is as distinct as it is beautiful.

Other new ones which are very good are Thalia, (Davidson's,) Ruby, Madam Sontag, Ajax, (Hovey's,) Alfred, (Chauviere's,) Amethyst, (Hovey's,) &c., &c.

237. BEGO'NIA BISSERRA'TA *Lindl.* DOUBLE SERRATED BEGONIA. (Begoniàceæ.) Gautemala.

A stove or greenhouse plant; growing two to three feet high; with rose and white flowers; appearing in summer; increased by cuttings; grown in rich, light soil. Bot. Mag., 1853, pl. 4746.

A handsome summer-flowering species, attaining a good height, with large pale rose and white blossoms, displayed in long cymose panicles; leaves alternate, on long petioles broadly cordate, with five lobes, ciliated. In England, it requires the stove, but in our climate it would, like most of the family, prove a fine summer greenhouse plant. *(Bot. Mag.*, Nov.)

238. METTERNI'CHIA PRI'NCEPS *Dun.* PRINCELY METTERNICHIA. (Solanaceæ.) Brazil.

A stove shrub; growing three feet high; with white flowers; appearing in spring; increased by cuttings; grown in leaf-mould, peat and loam. Bot. Mag., 1853, pl. 4747.

A very beautiful plant, with large white campanulate flowers, powerfully and delightfully fragrant, and appearing in large terminal clusters; the leaves long ovate, deep green; branches glabrous; it has somewhat the appearance of the Solandra, and is a very fine addition to the hothouse. *(Bot. Mag.*, Nov.)

239. CAMPA'NULA VIDA'LII *H. C. Wats.* VIDAL'S BELLFLOWER. (Campanulaceæ.) Azores.

A hardy or half hardy perennial plant; growing two feet high; with white flowers; appearing in summer; increased by cuttings and divisions of the roots; cultivated in good rich soil. Bot. Mag., 1853, pl. 4748.

A new and very handsome campanula, which has already been introduced, but which we have not yet seen in flower. In England it proves quite hardy. It grows two feet high, and throws up a strong stem, clothed with large, pure white, drooping flowers; very showy and ornamental. If it should prove hardy, it will be a fine acquisition, but as it is a native of the Azores, where it was found on an insulated rock of the coast, it is doubtful whether it will be more than a frame plant. (*Bot. Mag.*, Nov.)

240. PAPA'VER PILO'SUM *Smith*. LARGE HAIRY POPPY. (Papaveraceæ.)?

A hardy perennial; growing two to three feet high; with brick-red flowers; appearing in summer; increased by seeds; grown in any good soil. Bot. Mag., 1853, pl. 4749.

A large and showy perennial species of the poppy, quite hardy in the Kew Gardens, where it was introduced, but by whom is not known. The flowers are large, of a "handsome brick-red color, with a pale spot at the base of each petal," very showy and highly desirable as a hardy perennial. It grows readily in any good soil. (*Bot. Mag.*, Nov.)

241. DICTYANTHUS PAVO'NII *Decaisne*. PAVON'S DICTYANTHUS. (Asclepiadeæ.) New Spain.

A stove climber; growing 6 feet high; with spotted flowers; appearing in September; increased by cuttings; grown in leaf-mould, peat and sand. Bot. Mag., 1853, pl. 4750.

A singular Asclepiadeous plant, with flowers like the Stapelia, requiring the heat of the stove, where it flowers profusely in September. Its singularity rather than its beauty recommend it to the attention of amateurs. (*Bot. Mag.*, Nov.)

242. PLUMIE'RA JAMESO'NI *Hooker*. JAMESON'S PLUMIERA. (Apocynaceæ.) Guayaquil.

A stove plant; growing four feet high; with red and yellow flowers; appearing in summer; increased by cuttings; grown in rich, light soil. Bot. Mag., 1853, pl. 4751.

A very handsome stove plant, with large, broad, deep green leaves, and terminal cymes of large, showy, rich flowers, yellowish, the pedicels and peduncles of a deep red. It is from South America, requires a stove heat, and is a splendid addition to any collection. (*Bot. Mag.*, Nov.)

243. Co'leus Blu'mei *Benth.* Blume's Coleus. (Labiateæ.) Java.

A stove plant; growing one to two feet high; with purple and white flowers; appearing all summer; increased by cuttings; grown in good rich soil. Bot. Mag., 1853, pl. 4754.

"An extremely ornamental plant, the leaves being entirely mottled and blotched with deep purple or sanguineous stains, while the long whorled racemes of flowers are prettily varied with purple and white. Nothing is more easily cultivated, and no stove should be without it, for it flowers through the summer, and till the setting in of winter." In our climate it would be an admirable bedding plant, flowering freely till frost, and its singularly blotched and variegated foliage would form a feature particularly attractive in the border. It should be speedily introduced. (*Bot. Mag.*, Dec.)

244. Didymoca'rpus Humboldtia'na *Gardn.* Humboldtian Didymocarpus. (Cytandàceæ.) Ceylon.

A greenhouse plant; growing six inches high; with pale blue flowers; appearing in summer; increased by division of the roots; grown in leaf-mould, peat and sand. Bot. Mag., 1853, pl. 4757.

A pretty little plant, found in moist places in the mountains of Ceylon, at an elevation of 4000 to 5000 feet; the flowers resemble a small gloxinia, and are produced on short stems five or six in a cluster, drooping, and of a pale blue color, with a white throat. Very pretty. (*Bot. Mag.*, Dec.)

245. Exa'cum macra'nthum *Arn.* Large flowered Exacum. (Gentiàneæ.) Ceylon.

A greenhouse biennial, (?) growing a foot and a half high; with blue flowers; appearing in autumn; increased by seeds; grown in peat and leaf mould. Bot. Mag., 1854. pl. 477.

A "most lovely gentianoid plant," introduced from Ceylon, where it grows at an elevation of 6000 feet. It bears a strong resemblance in its flowers to the Solànum amazónicum, having expanded petals of a deep rich blue, and stamens of a golden yellow, very striking and beautiful. It is believed to be "only an annual or a biennial at the most." It was raised from seed received from Ceylon. (*Bot. Mag.*, March.)

246. He'intzia tigri'na *Kawten.* Spotted flowered Heintzia. (Gesneràceæ.) Caraccas.

A stove plant; growing three feet high; with white and crimson flowers; appearing in winter; increased by cuttings; grown in leaf-mould, peat and sand. Bot. Mag., 1854, pl. 4774.

A rather showy, though somewhat curious gesneraceous plant, with large foliage, and axillary flowers, white, spotted with crimson; it requires the heat of the stove, and blossoms in winter. *(Bot. Mag.*, April.)

Mr. J. A. Kenrick's Magnolias.—In our account of the hardy magnolias, we inadvertently omitted to mention the fine specimens of Mr. Kenrick, which he has successfully cultivated for so many years that they are now, without exception, as a whole, the finest in New England. We did not mention them particularly, as we have given a full description of them in our previous volumes, (X, p. 251, and XV, p. 408,) as will be seen by turning to the same. We now allow Mr. Kenrick to speak for himself, simply stating that though we never saw his specimens in bloom, we have examined them at other times, and they are the finest ones to be found in any collection around Boston:—

Mr. C. M. Hovey. Dear Sir,—Had I known you contemplated writing an article upon the "hardy magnolias" for your Magazine, I should have liked to show you some specimens which I think worthy of note, and if you can spare time, *within a day or two*, should be happy to show you a plant of Soulang*iana* now going out of flower, which has produced from 1500 to 2000 flowers this season,—and a plant of *Conspicua* which has this season produced *at least* 3000 flowers, and was much admired. I supposed you were aware of their existence, but as they were not mentioned, presume you were not. The macrophylla also I have had in flower for twelve or fifteen years, and is one of the largest specimens in this vicinity. I have also good specimens of the cordata and longifolia, besides the more common kinds. In giving statistics, I think it proper that you should be in possession of facts relating to the finest specimens in the State.—*Respectfully yours,* John A. Kenrick, *Newton, May* 15, 1854.

MISCELLANEOUS INTELLIGENCE.

Art. I. *General Notices.*

Cultivation of the Gooseberry in Canada.—Nowhere on the American Continent can the gooseberry be raised in greater perfection than in Canada, and the northern part of the United States, a fact which is admitted by the most eminent cultivators and writers on Horticulture amongst our neighbors across the lines, and nowhere in our Province has the cultivation of this fine fruit been brought to such a high state as at the city of Montreal. The Horticultural Society established there some seven or eight years ago has been mainly instrumental in directing more attention to be turned to gooseberry culture, as well as increasing to a vast extent the taste for gardening generally. At the gooseberry shows of the Society, held in August, we have seen displays of this fruit which could only be excelled in the moist climate of England, and which evinced a skill and perseverance on the part of our amateurs and gardeners of which we may well be proud. Ten years ago only a few straggling old sorts of the gooseberry were grown; now over two hundred varieties can be shown in their proper season, comprising all the sorts most famed for either size or flavor.

The gooseberry is a fruit universally admired. When we consider the delicious flavor of some of the best varieties, the ease with which they are grown, the small piece of ground they occupy, and the enormous product they sometimes yield, we can only wonder its cultivation has generally been so sadly neglected. No garden, however humble, ought to want its share of gooseberry trees. In the hot season of the year they provide us with an abundant supply of luscious and healthy fruit—any quantity of them can be eaten with impunity—and have seen them in universal use in large quantities by every class of people, and never once saw any evil results. For green use in tarts, and in the shape of preserves, they are also invaluable. To sum up its qualities we would say, give us a good "Ironmonger," well colored and of tolerable size, and we do not envy any one, either their grapes or their peaches. Loudon says it is the most valuable of all fruits, since it can be grown in less space, in more unfavorable circumstances, and brought sooner into bearing than any other.

As we believe the gooseberry can be grown to perfection by the humblest cottager, we propose here to offer a few short remarks regarding our method of cultivation, as a guide to our farmers and others who may desire to add this fruit to the produce of their gardens and orchards. The great barrier to its successful cultivation hitherto has been the want of proper pruning, and the carelessness with which they have been raised when in a young state; we see them generally allowed to grow without pruning at all, whereby they become quite rampant and thicket-like in their growth, and instead of yielding fruit, only produce leaves and branches. Another serious fault is allowing the bushes to throw up suckers from their roots, whereas they ought to be grown with a clear stem from six to twelve inches high; straggling low-set bushes, which are infested with suckers, will never produce fruit properly, and the sure and best remedy is to cast them out. Contrast with this, a clean-legged bush, as it is technically called, that is, with a straight clear stem nine inches high, properly pruned and thinned of all useless and superfluous branches, and loaded with half a bushel of fine fruit, and it will be admitted that the sort of cultivation we have spoken of as generally seen, is not cultivation at all. Young gooseberry trees ought to be chosen for planting two or three years old, preferring the first mentioned age if the bushes are strong and hearty; choose such as are raised from *cuttings*, discarding those procured *layers*, which can never make good plants. Set them in tolerably *damp* soil; here is the grand secret with the gooseberry in this climate; it naturally loves a moist atmosphere; this we have it not to give in this country; if the soil be not naturally deep it should be made so by trenching and manuring. England possesses a moist climate, and there it meets a congenial home. Here, then, we must plant it, if we have a choice of a situation, in a low, *damp* soil, not a *wet* one, but where the ground is moist and cool; it could be grown admirably under the shade of orchard trees, although some cultivators consider that it will not thrive if planted in such situations. We have seen whole plantations of them set out under the shade of apple trees, from which the most abundant crops were annually gathered.

The ground must be pretty well manured and kept scrupulously clean; we have seen plantations in Britain give unfailing crops, for many successive years, without manure; but in this dry and warm climate, it strikes us that we must manure more liberally for every sort of crop, if vegetation is to be carried forward. The trees ought to be dug round every fall, using a strong grape in preference to a spade; and they will amply repay the additional care of a mulching of manure over the surface of the ground, which serves to keep the roots cool, as well as affording nourishment.

Where it is practical to do so, we consider the best method of planting is to set out the young bushes in squares or patches, giving them from five to six feet distance apart; we are speaking now of grounds which are well kept, and where a certain neatness prevails at all seasons; a very common way is to plant the bushes all around the borders at equal distances, but by this plan these flower spaces are kept continually trodden over by the feet (a ripe Graset is a tempting morsel!) and also littered by the fallen fruit. It is, moreover, not always the case that the soil of the borders around the garden walks are suitable for the cultivation of gooseberries, so that it will be found most judicious to choose a proper piece of ground, and set it apart for their cultivation alone.

To ensure a good supply of well flavored fruit, the bushes must be pruned every fall or spring, (preferring the former season; we say they must not only be pruned, but severely pruned—more so than any other species of fruit tree—the heart of the bush should be well cut out, so as to keep it open, and nearly all the young side shoots of the past year should be cut out, leaving only two or three eyes at the base of each of the leading shoots; and a few of the side shoots should only, however, be shortened to about half their length. By the leading shoots,—we mean those which terminate the old branches; by attending to these few easy rules, and using the knife unsparingly, but skilfully, we would soon see different looking fruit from that usually produced. We may as well here state that the berries are produced over every part of the bush, except the wiry old wood and current year shoots.

A gooseberry plantation will last one's life-time. They are in perfection after they are six years planted out, and will produce regularly for many years afterwards.

The medium sized and small sorts will be generally found to be the best flavored, and therefore most worthy of cultivation. In this country, however, these sorts are not so saleable as the large kinds; the largest and heavier kind which has ever been raised, is a very excellent and palatable fruit; it is a red sort, and we may here remark that the red ones are generally the richest flavored kinds, those of a white color being the most flavorless, although perhaps as profitable for market as any of the others. The richest flavored are those of Scotch and Irish origin. But nowhere has their cultivation been so much attended to as in Lancashire and the middle portions of England. Last summer we made a professional tour through all these parts, and it was quite interesting to see the zeal and competition evinced by the weavers' gardeners, and the amateurs, in their favorite pursuit.—MESSRS. COCKBURN & BROWN, *Cote de Neiges, Canada.*

DIPLADENIA SPLENDENS.—The large, Convolvulus-like, and exquisitely colored blossoms of this plant are hardly matched by those of any twiner with which I am acquainted, and, under proper management, its charming flowers are produced very abundantly for some two or three months in succession. Notwithstanding that it is perhaps the finest of all twiners which we possess, it is by no means universally cultivated; for in the hands of many it is found to bloom very shyly, or not at all, consequently it has never received the attention which it deserves. To insure success in its culture, a light, warm, moist situation, and a brisk bottom heat are indispensable, and where such accommodation cannot be commanded, it is useless to attempt to grow it; with proper convenience, however, it grows very rapidly, and blooms abundantly.

Cuttings made of short-jointed, half ripe shoots, root freely if inserted in sandy, peaty soil, covered with a bell-glass, and afforded a sharp bottom heat. They should be got in as early in the season as possible, potted off immediately they are found to be sufficiently rooted, and kept growing in a brisk bottom heat, with a close, moist atmosphere, so as to get them strong and well established in 6-inch pots in the course of the season, in which state there will be no danger of losing them during winter. In autumn gradually reduce the supply of water, and expose the plants to a circulation of warm dry air, in order to ripen the wood, and when this is effected remove them to a house where the temperature may average from 50° to 60°, and allow them a period of rest, giving no water to the soil during that season. Towards the end of January, or as soon afterwards as circumstances will admit, turn the plants out of their pots, shaking away a portion of the old soil, so as to be able to repot them in fresh material without using much larger pots, at the same time cutting back the shoot to a strong bud near the base. Be careful to have the fresh soil in a most, healthy state, so as to prevent the necessity of giving much water until growth shall have commenced, and the roots taken to the soil. After potting, place the plants in a pit, or house, where the atmosphere is kept warm and moist, and where the pots can be plunged in a bottom heat of about 80°, syringing over-head in the morning and evening of fine days. Here growth will soon commence, and when this is the case give a more liberal supply of water at the root.

As the shoots advance, keep them regularly tied to supports, in order to prevent their being broken, and as soon as the roots get good hold of the soil, shift into the flowering pots, which, for the present season, should not be larger than 12-inch ones. Return the plants after shifting to a brisk bottom heat, and maintain a warm moist atmosphere, to induce active growth. Decide upon the method of training to be adopted at once, and keep the shoots regularly tied in, placing them sufficiently far apart to insure the production of strong, short-jointed wood, and to induce the formation of side shoots, upon which the flowers are borne. Whilst it may be desirable to ensure active growth, give a liberal supply of manure water to the soil, syringing the plants overhead morning and evening, and maintaining a moist warm atmosphere; but avoid much shading, the only result of which is to induce the production of soft spongy wood, from which flowers can hardly be expected. When a good-sized plant is obtained, unless it begins to show for flowering, give less water at the root, and a freer circulation of air, with full exposure to sunshine, which will check the tendency to growth, and assist in inducing the formation of flowers. The specimens may be removed to a close part of the conservatory while in bloom, where they will flower in great perfection for some two months, but care must be observed to prepare them for the change by rendering it gradual. And specimens intended to be removed to the conservatory while in flower should be started into growth early in spring, so as to have them in flower in June, in which month the temperature of the conservatory will, with a little care, as to placing them in the warmest corner, be suitable for them, but plants blooming late in autumn must be afforded the temperature of an intermediate house. Give a liberal supply of manure-water to the soil during the blooming season, and carefully guard the blossoms from the effects of damp, by which they are very easily injured.

When the beauty of the specimens is over remove them to a light airy part of a house, giving a sparing supply of water to the soil, and when the wood is well ripened discontinue the application of water altogether during the period of rest, which should not be less than six weeks or two months. By annually shaking the greater portion of the old soil from amongst the roots, so as to allow of repotting in fresh soil, trimming away any unhealthy roots, and properly cutting back the shoots, the specimens will last for several seasons.

The most suitable soil for this Dipladenia is good fresh turfy loam, leaf soil, and fibrous peat, in about equal proportions, with a liberal admixture of sharp sand and lumpy pieces of charcoal to keep the mass open and porous. It is a good practice to slightly bake the leaf soil before using it, so as to destroy any worms it may contain, which are very mischievous to plants in bottom-heat.—(*Gard. Chron.*, 1854, p. 37.)

Propagation of Fancy Pelargoniums.—About the beginning of February is as good a time as any for taking cuttings: select some good tops from the very best sorts that are out; get as many thumb-pots as you will require for the purpose; fill them with rich turfy mould, and put one cutting into each pot; but previous to filling the pots let them be well drained with broken charcoal or potsherds; then with a piece of round stick, make a hole an inch deep, fill it with silver-sand, and then put in the cutting, giving the pot a slight tap on the potting-board to settle the soil; dip a piece of stick into some water, and hold it downwards, in order that three or four drops may fall close to the side of the cutting, this will settle the whole together, and the quantity of water will be quite sufficient for three or four days; after that, add a little more in a similar way, or with a fine-rosed watering-pot, as may be thought needful. When you have finished this part of the work, let all the pots be plunged in a slight bottom-heat, say from 65° to 70°; give a little air in the daytime, to prevent the cuttings from damping off. I do not recommend the practice of putting a great quantity of hard-wooded cuttings into one pot; two out of three will take root, and then you spoil several in getting them apart; strong cuttings struck singly in pots as directed, and well managed after they have rooted, will make fine specimens by June or July, the following season.—(*Gard. Chron.*, 1854, p. 7.)

Cultivation of Japan Lilies.—These noble autumnal flowering plants form when in bloom objects of the greatest beauty, either in the greenhouse, drawing-room, or flower-garden; for they will be found to succeed well planted out in the open borders or beds. I have no doubt that they will shortly become general favorites for out-door work. The situation that should be selected for planting them in the open ground, should be somewhat sheltered by shrubs or other means, in order to protect them from heavy winds, which are very injurious to the flowers and foliage. The best season for planting them in the open ground is February. At the time of planting examine the soil where they are intended to be placed, and if found wet, put some potsherds at the bottom for drainage. Then place on these some rough fibrous peat and sand well mixed together, covering the bulbs 8 inches deep. If the bulbs are strong, they may be planted a foot apart, each way; if intermediate sized bulbs, 9 inches will be sufficient. About the latter end of March, or the beginning of April, they will appear above ground. Should the weather at this period be cold or frosty, place some rough pieces of peat around their stems, and keep them covered with it until there is a favorable change. This will be found the best protection for them at that season, as well as adding to their strength and vigor when they are in a more advanced state of growth, as it will induce them to throw out their strong fleshy roots into the peat with the greatest freedom, and often cause them to form fine bulbs round the stem. Should the summer be hot and dry, some manure-water would be of the greatest benefit to them. It should be prepared from sheep or cow-droppings, but not over-strong, as it can be applied more frequently if given them in a moderate state. When they have done blooming in the autumn, and show a disposition to rest, take them up, and put them in some dry mould, to keep them from shrivelling, placing them either in a room or shed until planting time arrives next season. It will be found that an over supply of water while at rest, is the principal thing that will injure them; and after such an unusually wet season as the one just past, I would always advise all bulbs to be taken up in winter, as I have seen numbers of fine bulbs completely destroyed by too much wet. Should fine specimens be required in pots for decorating the greenhouse or conservatory, prepare some 14-inch pots, well drain them, and use the same compost as before recommended, selecting three of the largest bulbs for each pot, and covering them the same depth with the soil as in the open border. When potted, place them in a cold pit or frame, giving them plenty of air, but no water until they show their stems above ground, when water may be applied very sparingly at first, increasing the supply as they advance. When they have made growth from 12 to 18 inches long, place round their stems some large pieces of rough peat, which will cause them to throw out fine strong roots in great profusion, and invigorate their growth amazingly. In the month of April they may be placed in the open air in some rather sheltered situation, where they can be liberally supplied with manure-water. Should any portion of them be required for decorative purposes at an earlier period, they may be removed into the greenhouse, to forward them into bloom; but if not required early, they may remain out of doors until they bloom, and then taken to the place where their beauty is required to be seen. I have no doubt that shortly some very fine hybrids will be brought into general cultivation, as I have in my collection from twelve to twenty distinct varieties, varying in shape and color, some of them very robust in their growth, with a clear white ground, distinctly spotted with rich crimson; others of a pinkish ground, beautifully spotted; some with beautiful stripes and blotches upon white grounds, while others are of a delicate pink ground, finely spotted, with very broad petals, and beautifully reflexed. These have been produced by hybridization; and I have no doubt that many other cultivators of these beautiful plants have been trying their skill in the same way; and I hope ere long to see our present collection enriched by their perseverance and attention.—(*Ib.*, p. 7.)

EFFECT OF SULPHATE OF LIME ON VEGETABLE SUBSTANCES.—About six weeks since, I was engaged in making various experiments on the effect of sulphate of lime on vegetable substances. A portion of the substances then used by me was carelessly thrown aside, and on returning to my experiments about a fortnight afterwards, I was surprised to find that decomposition had not taken place in those portions of the vegetables which had been subjected to the action of sulphate, while those which had not been so treated were completely decayed. Among the articles experimented upon, were a number of potatoes, each of which was affected by the prevalent disease; some of these remain sound to the present day, the others have some time since completely rotted away. Subsequently, I procured some more potatoes, and also some beet roots, the former being, as far as I could judge, all diseased. I divided the potatoes into three portions. One lot I placed in a vessel with a weak solution of sulphuric acid, and from thence I placed them in a solution of weak lime-water. In the second lot the process was reversed; that is to say, the potatoes were first placed in the lime-water, and then in the acid. The third lot was left untouched. Ten days afterwards I examined the potatoes, and found, as I expected, that the potatoes which had not been treated with the sulphate were rapidly decaying,—those which had been first placed in the solution of lime and then in the acid, were more nearly decomposed,—while those which had been treated in the mode first described, remained as sound as when first taken in hand. Upon being cut open, the diseased part of the potatoes was not found to have spread internally, and the flavor of the root was in no degree affected by the application of the process, nor do I think that its germinating power was injured by the effect of the sulphate. The effect upon the beet roots was similar to that produced on the potatoes, and which would seem to be somewhat analogous to that of galvanizing metals, viz., protecting the substances from the effect of atmospheric agencies. I may add, that muriatic and other acids have been employed by me on other occasions with equal success,—the only agents required appearing to be those which will most readily produce a sulphate in contact with the substances required to be preserved. I do not think that any insuperable difficulty exists with respect to the application of the process. The acid I employed was very weak—about one part to two hundred of water; the lime-water was about the consistency of milk.—(*Ib.*, p. 7.)

SPRING FLOWERS IN THE NORTH OF CHINA.—In the North of China there are a number of plants which have their flower-buds very prominently developed in autumn, so much so that they are ready to burst into bloom before the winter has quite passed by, or, at all events, on the first dawn of spring. Amongst these Jasminum-nudiflorum occupies a prominent position. Its yellow blossoms, which it produces in great abundance, may be seen not unfrequently peeping out from amongst the snow, and reminds the stranger in these remote regions, of the beautiful primroses and cowslips which grow on the shaded banks of his own land. Nearly as early as this, the pretty daisy-like Spiræa prunifolia, the yellow Forsythia viridissima, the lilac

Daphne Fortunei, and the pink Judas tree, become covered with blossoms, and make our Northern Chinese gardens extremely gay. There are also some good Camellias which flower at this time, but they are generally grown in pots, under such shelter as mat-sheds and other buildings of a like kind can afford. The double blossomed Peach, of which there are three very distinct varieties now in England, are perhaps the gayest of all things which flower in early spring. Fancy, if you can, trees fully as large as our almond, literally loaded with rich colored blossoms, nearly as large and double as roses, and you will have some idea of the effect produced by these fine trees in this part of the world. On the southwest side of Shanghae there are numerous Peach gardens studded over the country. These are well worth a visit in the month of April, as the trees are then in full bloom, and have a charming effect upon the landscape. It is in this part of the country where the celebrated Shanghae Peach is largely cultivated. On the graves, which are here scattered over all the fields and appear like huge mounds of earth, I observed many pretty Violets in flower, both white and purple, but all nearly scentless. A little later in the season, that is, from the 20th of April to the beginning of May, another race of flowering shrubs and herbaceous plants succeed those I have already named. The most conspicuous amongst them are Viburnum macrocephalum and dilatatum, with their large heads of snow-white flowers; Spiræa Reevesiana, and the double variety, which is more beautiful than the original species; Weigela rosea, now well known in Europe; Moutans of various hues of color; Azaleas, particularly the lovely little "Amœna;" Kerria japonica, the lilac and white Glycines, Roses, Dielytra spectabilis, and Primula cortusoides. It will easily be believed that with such a host of Flora's beauties, these Chinese gardens must be gay indeed. But perhaps the most beautiful sight of all is the Glycine sinensis, climbing upon and hanging down from other trees. I believe I noticed in my former "Notes," the fine effects produced by this climber when in such situations. I have again observed numerous examples this spring, and cannot help drawing attention once more to the subject. The fine plant of this species upon the Chiswick Garden wall, is much and justly admired, but if you will imagine a plant equally large, or in some instances much larger, attaching itself to a tree, or even a group of trees, entwining itself round the stems, running up every branch, and weighing down every branchlet; and, in the end of April, or beginning of May, covered with flowers, some faint idea may be formed of the fine effects produced by the Glycine in its native country. I believe it would not succeed if managed in this way near London, or anywhere in the north, but the experiment would be worth a trial in some parts of Europe, where the summers are warmer than they are in England. As I know you have many readers in the United States of America, who are as fond of their parks and gardens as we are of ours, I cannot do better than recommend the experiment to them. Many of our Northern Chinese plants succeed admirably in America. China and America are both situated on the eastern side of large continents; they are equally liable to extremes of heat and cold, and consequently the shrubs and trees of one country are almost certain to succeed as well in the other, provided they are reared in the same latitudes, and grown in the same kind of soil.—(*Ib.*, p. 54.)

ART. II. *Societies.*

HARTFORD COUNTY HORTICULTURAL.

At the annual meeting of the Hartford County Horticultural Society, the following gentlemen were chosen as officers for the year ensuing, viz.:—

President—William W. Turner.

Vice Presidents—Henry Mygatt, Farmington; John M. Niles, John S. Butler, Henry W. Terry, Hartford; Charles L. Porter, East Hartford; Noah W. Stanley, New Britain; Norman Porter, Berlin; E. A. Holcomb, Granby; Salmon Lyman, Manchester.

Recording Secretary—Gurdon W. Russell.

Corresponding Secretary—Thomas R. Dutton.

Treasurer—P. D. Stillman.

Auditor—H. L. Bidwell.

Standing Committee—H. A. Grant, Joseph Winship, George Beach, Jr., John H. Goodwin, H. L. Bidwell, Henry Affleck, Daniel S. Dewey, George B. Hawley, George Affleck, Charles T. Webster, H. D. Welles, Wm. F. Tuttle.—*Respectfully yours*, THOMAS R. DUTTON, *Rec. Sec.*

PENNSYLVANIA HORTICULTURAL.

The stated meeting of this Society occurred on Monday evening, March 20, in the Chinese Saloon, R. Cornelius, Vice President, in the chair.

The display on the occasion consisted of fine Azaleas, from Mr. Dundas and Robert Buist's houses; and from the latter, a collection of 12 choice specimens of greenhouse plants. From Mr. Cope's, a few new plants, a beautiful basket of cut flowers, hand bouquets, and a dish of strawberries; and a large table of culinary vegetables was shown from Thomas Meghran, gardener to W. S. Stewart, Torrisdale.

Premiums awarded were—Azalea, specimen plant—for the best, to John Pollock, gardener to Jas. Dundas; *Dwarf Azaleas*, 3 plants, for the best, to Robert Buist; collection of 12 plants, to the same; specimen plant, for the best, (*Begonia Manicata*,) to the same; for the second best, (*Allamanda Nercifolia*,) to Jerome Graff, gardener to C. Cope. A premium of $2 to Robert Buist, for a beautifully bloomed plant of *Conoclinum Ianthinum.* New plants shown for the first time—A premium of $3 to Jerome Graff, for a fine plant of *Dendrobium aggregatum;* basket of cut flowers, for the best, to the same; bouquets, pair, for the best, to the same.

The Committee called the attention of the Society particularly to the fine Camellia "Ellen," a seedling of Mr. Mackenzie's, which received the first prize, about three years ago; it is still considered a very superior flower.

The Fruit Committee awarded a special premium of $2 to Jerome Graff, gardener to C. Cope, for a dish of strawberries.

By the Committee on Vegetables—Lettuce, six heads—for the best, to Thos. Meghran, gardener to W. S. Stewart, for the best display of the same. The Committee noticed a plate of Tomatoes shown by Wm. Johns.

Votes of thanks were ordered to James Vick, Jr., for the volume of the Horticulturist for 1853; to Charles Downing, for Elliott's Fruit Book; to H. R. Noll, for his Flora of Pennsylvania; to Mrs. C. Stanly, for 2 volumes.

The stated meeting of this Society was held on Tuesday evening, May 16, 1854,—the President in the chair. The hall was thrown open at 5 o'clock, P. M., and was graced with the élite of the city. A finer display has not been shown before the Society for many years. Contributions were brought from nearly all the greenhouses and conservatories in the vicinity.

Premiums were awarded as follows:—By the Committee on Plants and Flowers—Pelargoniums, 8 plants, for the best, to Robert Buist. Specimen Pelargoniums, for the best, to Robert Buist. Cinerarias, 8 plants, for the best, to Thomas Richardson, New York, (very fine, and attracted special attention.) Roses, for the best and for the second best, to F. Allgier. Tulips, cut flowers, for the best, to G. W. Earle. Collections of Plants, for the best, to John Pollock; for the second best, to Robert Buist; for the third best, to Thomas Robertson. Specimen Plants, for the best, to John Pollock; for the second best, to James Kent. New Plants, shown for the first time, a premium of $4 to Robert Buist, for Orchids, Geraniums, and Begonia Zanthina; of $1 to John Pollock, for Orchids. Table design, for the best, to Jerome Graff, gardener to C. Cope. Baskets, for the best, to Jerome Graff; for the second best, to Alex. Burnett. Of Indigenous Flowers, for the best, to Meehan & Saunders. Bouquets, pair, for the best, to Jerome Graff; for the second best, to James Kent. Special premiums, $3 to Charles Miller, for a collectinn of plants; $2 to John Pollock, for Gloxinias and other plants; $2 to Thomas Richardson, N. Y., for beautiful Calceolarias; $2 to John Sherwood, for a collection of Roses.

The Committee called particular attention to a beautiful collection of miscellaneous plants, by Wm. Sinton, to which they award a premium of $5. They also call special attention to two very fine specimens of Strelitzia regina, for which they award a special premium of $3 to Isaac Collins. Attention was called to a good collection of cut flowers, from Mrs. Holbrook, New York.

By the Fruit Committee—Special premiums, viz.:—To Albinus L. Felton, for a fine collection of Strawberries in pots, with ripe fruit, $3. To Jerome Graff, for four bunches of Black Hamburg Grapes, $2. For 7 fine Lemons, from H. N. Johnson, $1. They also notice a dish of fine Apples, from Dr. Hull of Alton, Ill., deposited by H. N. Johnson.

By the Committee on Vegetables—Rhubarb, 12 stalks, for the best, to Samuel Cooper. Asparagus, 24 stalks, for the best, to James M. Tage; for the second best, to Jerome Graff. Vegetables—Display for the best, by a market gardener, to A. L. Felton; and a special premium of $1 to Jerome Graff, for 3 dishes of very fine Tomatoes.

HORTICULTURAL OPERATIONS

FOR JUNE

FRUIT DEPARTMENT.

Notwithstanding the cold and backward weather of April, the season at the present time, (May 27th,) is full as early as last year; if any difference, even earlier by two or three days. The weather has been warm, with quantities of rain, and vegetation has come forward more rapidly than we ever recollect to have observed it. The planting season has been unusually short, and accompanied with such frequent rains, that not half the usual quantity of work has been accomplished.

Grape Vines in the early houses being at rest, little remains to be done. In the greenhouse they will require much attention this month; the first work is to thin the berries properly, shoulder the bunches, and cut away all the fruit beyond what the vine is able to bear, which is from 10 to 20 lbs. the vine; tie in the spurs firmly, and prune off all laterals as soon as they become too crowded; keep the floor and walks wet down two or three times a day in fine weather, and maintain a slightly higher temperature for a week or two. Vines in cold houses will now be in bloom, and the temperature should be kept up, guarding against cold draughts and raw easterly winds. Stop the laterals, from time to time, and water more cautiously till the fruit is well set and begun to swell. Vines in the open air should have attention now, and all superfluous shoots rubbed off, that those intended for bearing next year may have the entire strength of the vine.

Peach Trees in pots should be more liberally watered as the fruit continues to swell.

Strawberry Beds should be mulched with tan, or covered with straw, in order to keep the ground moist and the fruit clean. New beds may yet be made.

Fruit Trees, particularly pears, will need some attention this month. Continue to prune if they need it, and nip off the ends of the young wood, in order to produce fruit buds for the next year. Young trees, budded or grafted, should have the shoots carefully staked, and all suckers or side shoots rubbed off.

Insects should be looked after; use oil soap for the destruction of lice, slugs, &c., and begin in good season to do it. One pound to six gallons of water will be strong enough for the purpose.

FLOWER DEPARTMENT.

The heavy rains of the early part of last month prevented the completion of much of the spring work. In ground at all heavy, very little could be done, and up to this time much of the planting has not been done. This necessary delay will render it more urgent to proceed rapidly now that the weather is more settled, and the soil in good order.

This is the usual period of clearing out the houses and planting out the bedding stuff, and for a week or two there is plenty of work. As soon as the planting is over, the whole stock of plants should be carefully gone over, and put in order, repotting everything that needs it.

CAMELLIAS should be removed to the open air as soon as they have formed their buds, selecting a half-shady and cool situation.

AZALEAS will be making their new wood, and should be syringed freely, and the young wood stopped occasionally, to make the plants bushy and stout.

CHRYSANTHEMUMS should now be divided and potted, or if the young plants are already rooted, they should soon have a shift into the next size; use good, light, rich soil.

CINERARIAS will now require attention; and we refer the lover of these fine plants, to an article in the present number, on their management.

HEATHS and EPACRISES will require much attention; repot if they need it, and plunge in sand, tan, or ashes, in a cool, airy place.

STEPHANOTUS, DIPLADENIAS, and other choice climbing plants, should now be shifted into their blooming pots, and be neatly trained to handsome trellises.

ROSES, grown from cuttings this spring, may now be potted off, and placed in an old frame for a few days, till they get well established.

FUCHSIAS will require a shift into larger pots.

CACTUSES, as soon as done flowering, should be looked over, repotted, and put into good order.

JAPAN LILIES will now be growing rapidly, and such as need it should be shifted into larger pots.

ACHIMENES and GLOXINIAS still growing in small pots, or brought forward for a succession, should be shifted into the next size; now is the time to increase them by cuttings.

PELARGONIUMS will now be in full flower, and will require careful and liberal watering.

BEGONIAS for summer blooming, should now have a shift into larger pots.

FLOWER GARDEN AND SHRUBBERY.

Unless great diligence has been observed, this department will yet be in a backward state. Keep the lawn mowed neatly, and roll the walks. All grass or box edgings should be neatly dressed or cut, and the borders hoed and raked; plant out all vacant spaces with annuals or other plants, and get out all the bedding plants.

DAHLIAS should now be planted, beginning at once, and finishing about the 20th, so as to have a good succession of flowers.

ANNUALS of all kinds should be planted out in the borders or beds.

CARNATIONS and PICOTEES, now throwing up their flower stems, should be neatly staked.

TULIPS and HYACINTHS should be taken up the last of the month, or as soon as the foliage turns yellow.

ROSES should be looked after; the slug and thrip will soon destroy the foliage, if they are not syringed with oil soap.

THE MAGAZINE

OF

HORTICULTURE.

JULY, 1854.

ORIGINAL COMMUNICATIONS.

Art. I. *How to Make a Good Garden.*

A good garden is considered an indispensable part of every country or suburban residence; small it may be—perhaps of only a few hundred square feet—but nevertheless a garden, either for trees and flowers, for fruits and vegetables, or for all combined. The first idea, often, of a residence in the country comes from a love of trees and plants, and a desire to rear and cultivate them. But everywhere, even in the crowded streets of cities, where wealth will allow, we surround our dwellings with gardens, of greater or less extent, so strong is the natural love of rural pleasures and enjoyments.

Taking it for granted that everybody likes a good and well-kept garden, and that the object of a greater part of those who build in the country is to possess one, it becomes a subject of much importance—certainly next to building itself, if not before it—to know "how to make a good one;" for we think it will be admitted that few can claim the credit of coming up to the standard of excellence in this respect. Occasionally we find some which may be considered models of neatness and good taste; but generally, and too often, there is a want of knowledge, care and attention, small in themselves in the beginning, yet indispensable in the attainment of good cultivation.

Presuming, therefore, that a few hints will not be out of place at this season, when perhaps many may be commencing to build, or contemplate the remodeling of their grounds, we embrace the opportunity to give a little advice for their guidance, that they may not be led into error.

The first great mistake with all who are forming country residences or small gardens is the neglect of the preparation of the ground. Unless this is attended to, all future operations will only end in disappointment and vexation; that is, if any degree of excellence is desired to be attained. Grounds may be judiciously laid out, carefully planted, thoroughly cultivated, and highly kept; yet if the first great object of the preparation of the soil has been overlooked, partial failure must be expected.

The first thing then, location of the ground being fixed upon, and the place for building marked out, if a new residence, is to thoroughly trench and prepare the soil. Of course we do not include in the term garden, acres of land intended for lawn and pleasure ground, but we mean the flower, fruit, or kitchen garden, if they are separate departments, or all to be combined in one. The time to do it is at once, before there is anything on the ground, that no future operations may prevent its completion. Put off or neglected for a more seasonable time, the ground, unintentionally perhaps, is planted, and then delays commence, new accessions render it more difficult, till at length it is given up, and the garden remains in its original state, the owner reaping only half the results which a little forethought and some matured plan would have enabled him to do.

Trenching is a simple operation, but so rarely attempted that many do not know how it is to be done. Indeed, we have seen individuals who consider a piece of ground trenched two feet deep as thoroughly spoiled; for this reason, that the poor subsoil was turned to the surface, and was so lean and hungry that, covered with manure, it would not be able to grow a good crop! It would be useless to urge the advantages of trenching to those who entertain such notions; but as there are others who are willing to learn to do a good thing, we would impress upon them the importance of trenching to the depth of at least two feet, and if the nature of the soil will admit, even three feet.

The operation is a simple one; beginning on one side of the garden, throw out a trench to the proper width and length and two or three feet deep; this should be carried to the other side to fill up the last trench. Next proceed to throw a trench of the same width into the one already opened, placing the top soil at the bottom, unless the subsoil is all clay or sand, when the top spit, as it is called, should be mixed with the bottom in the process of trenching. But as there are not many soils which will not bear trenching two feet without this, there is no great need of doing it. Proceed trench by trench till the whole is done, when the ground should be properly levelled. The next thing is to cover the whole surface with a coat of good manure, which should be well spaded in, turning the soil up well together. After allowing a reasonable time to settle, it will then be ready for planting.

One thing should not be forgotten; if the location is wet or very damp, or the subsoil clay, proper drains should be made to take off all the superfluous water; for trenching in a soil naturally wet, would be attended with injurious results. Tiles, or blind drains, as they are called, will answer the purpose.

This is the course we would advise with gardens about to be formed anew. With older grounds, the work must be done gradually; all the spaces between the trees, if of large size, should be trenched, cutting as near to the main roots as possible without injuring them; if small they can be removed. Proceed in the same manner as we have described until all the ground is thoroughly trenched.

No drought of summer will affect a garden trenched as we have directed. The roots of all plants push deeper, and will penetrate to the rich soil below, and a vigor of habit and richness of foliage will be given to everything raised on the soil, as will rarely, if ever, be seen in unprepared ground.

These remarks we might extend to greater length, and go more into detail; but we think we shall be understood in what we have said, and that there need be no excuse, if our advice is followed, for not having a good garden. In another number we shall take up the subject again, and have something to say of the arrangement of the walks, and the best fruits, plants and trees for filling up the grounds.

ART. II. *The Flowerless Plants.*

By WILSON FLAGG.

As a tribe of vegetable curiosities, pleasantly associated with cool grots, damp shady woods, rocks rising in the midst of the forest, with the edges of fountains, the roofs of old houses, and the trunks and decayed branches of trees, may be named the flowerless plants. Few persons know the extent of their advantages in the economy of vegetation; still less are they aware how greatly they contribute to the beauty of some of the most beautiful places in nature, affording tints for the delicate shading of many a native landscape, and an embossment for the display of some of the fairest flowers of the field. The violet and the anemone, that peep out upon us in the opening of spring, have a livelier glow and animation when embosomed in their green beds of mosses, and the arethusa blushes more beautifully by the side of the stream when overshadowed by the broad pennons of the umbrageous fern. The old tree with its mosses wears a look of freshness in its decay, the bald rock loses its baldness, with its crown of lichens and ferns, and every barren spot, in the pastures or by the wayside, is enlivened and variegated by the carpet of flowerless plants, that spread their green gloss and many-colored fringes over the surface of the soil.

Mosses enter into all our ideas of picturesque ruins; for they alone are evidence that the ruins are the work of time. An artificial ruin can have no such accompaniment, until time has hallowed it by veiling its surface with these memorials. They join with the ivy in adorning the relics of ancient grandeur, and spread over the perishable works of art the symbols of a beauty that endureth forever. While they are allied to ruins, and remind us of age and decay, they are themselves glowing in the freshness of youth, and cover the places they occupy with a perpetual verdure. They cluster around the decayed objects of nature and art, and are themselves the nurseries of many a little flower that depends on them for sustenance and protection. Though they bear no flowers upon their stems, they delight in cherishing in their soft velvet knolls the wood anemone, the star-wort, (Houstòn*ia* cærùlea,) the cypripedium and the white orchis—the nun of the meadows—whose roots are embedded among the fibres of the peat mosses, and derive support from the moisture that is accumulated around them. Nature has provided them as a protection to many delicate plants, which, embowered in their capillary foliage, are enabled to sustain the heat of summer and the cold of winter, and remain secure from the browsing herds.

Winter, which is a time of sleep with the higher vegetable tribes, is a season of activity with some of the flowerless plants. There are certain species of mosses and lichens that vegetate under the snow, and but few of the mosses are at all injuriously affected by the action of frost. By this power of living and growing in winter, they are fitted to act as a protection to other plants from the vicissitudes of winter weather, and by their close texture they prevent the washing away of the soil from the declivities into the valleys. They answer the double purpose of catching the floating particles of dust and retaining them about their roots, and of preventing any waste from the places they occupy. Finding in them the same protection which is afforded by the snow, or by the matting of straw provided by the gardener, there are many plants that vegetate under their surface, secure from the alternate action of freezing and thawing in winter, and of drought in summer. Hence certain flowers blossom more luxuriantly in a bed of mosses than in the unoccupied soil.

The mosses are seldom found in cultivated lands. As they grow entirely on the shallow surface, the labors of the tiller of the soil are fatal to them. They delight in old woods, in moist barren pastures, in solitary moorlands, and in all unfrequented places. In those situations they remain fresh and beautiful, while they prepare for the higher vegetable tribes many a barren spot, that must otherwise remain forever without its plant. They are therefore the pioneers of vegetable life; and nature, when she selects an uncongenial tract to be made productive of fruits or flowers, covers the surface with a close verdure of moss, and variegates it with lichens, before she strews the seeds of the higher plants to vegetate among their roots. The wise husbandman, who by a careful rotation of crops causes his land to be constantly productive, is but an humble imitator of nature's great principle of action.

The mosses have never been made objects of extensive cultivation by our florists. Every rambler in the wildwood knows their value and their beauty, which seem to have been overlooked by the cultivator. They undoubtedly possess qualities that might be rendered valuable for purposes of artificial embellishment. There is no tree with foliage of so perfect a green tint as that of the moss which covers the roofs of very old buildings. The mossy knolls in damp woods are peculiarly attractive on account of their verdure, and the fine velvety softness of their pleasantly rounded surface. Though the mosses produce no flowers, the little germs that grow on the extremities of their hair-like stems are perfect jewels. With them, however, it is the stem that exhibits the most beauty of hues, varying from a deep yellow to a clear and lively claret or crimson, while the termination is green or brown. I have nothing to say of the physiology of their propagation. I treat of mosses only as they are beautiful objects of sight, and useful agents in unfolding and distributing the bounties of nature. This tribe furnishes no sustenance to man or to any other animal. Those eatable plants which are called by the name of mosses are either lichens or seaweeds. Nature, who, with a provident hand, renders many of her productions capable of supplying a manifold purpose in her economy, has limited the agency of the mosses to a few simple and beautiful services. They perform under her invisible guidance, for the field and the forest, what is done by the painter and the embosser for the works of the builder of temples and palaces.

The ferns have fewer picturesque attractions than the mosses; but like the latter, they are allied with the primitive wilds of nature, with gloomy swamps, which they clothe with verdure, and with rocky precipices, on whose shelvy sides they are distributed like the tiles on a roof of a house. They resemble mosses in their dissimilarity to common vegetable forms; and their broad wing-like leaves or fronds are the conspicuous ornaments of wet woods and solitary pastures which are unvisited by the plough. By their singular appearance we are reminded of the primitive forms of vegetation on the earth's surface, and of the luxuriant productions of the tropics. In places where they are abundant, the hellebore, with its erect stem and prim foliage, towers above the low shrubbery, and the purple sarracenia rears its nodding flowers like some strange visitant from another clime.

The ferns are for the most part a coarse tribe of plants, having more beauty in their forms than in their texture. In temperate latitudes it is only their leaf or frond that is conspicuous, their stems being either prostrate or subterranean. Yet in some of the species nothing can be more beautiful than the ramifications of their fronds. In their arrangements we may observe a perfect harmony and regularity, without the formality that marks the compound leaves of other plants. Herein nature affords an example of a compound assemblage of parts, in a pleasing uniformity that far exceeds the most ingenious devices of art. Apparently similar arrangements are seen in the leaves of the poison hemlock, the milfoil, and the Roman wormwood; but their formality is not so beautifully blended with variety as that of the compound-leaved ferns.

In tropical countries some of the ferns are woody plants, attaining the size of trees, rising with a branchless trunk over fifty feet in height, and then spreading out their leaves like a palm tree. Hence they are singularly attractive objects to the traveller from the north, by the sight of which he seems to be carried back to the early ages of the world, before the human race had a foothold upon the earth. Here we know them only as an inferior tribe in relation to size, the tallest seldom exceeding two or three feet in height. Everything in their appearance is singular, from the time when they first push up their purple and yellow scrolls above the surface of the soil, covered with a sort of downy plumage, to the time when their leaves are spread out like an eagle's wings, and their long spikes of russet flowers, if they may be so called, stand erect above the weeds and grasses, forming a beautiful contrast with the pure summer greenness of all other vegetation.

There are few plants that exceed in beauty and delicacy of structure the common maiden-hair. The main stem is of a glossy jet, and divided into two principal branches, that produce in their turn several other branches from their upper side, resembling a compound pinnate leaf without its formality. In woods in the western part of this state is a remarkable fern called the walking leaf. It derives its name from a singular habit of striking root at the extremities of the fronds, giving origin to new plants, and travelling along in this manner from one point to another. There is only one climbing fern among our native plants. Equally beautiful and rare, it is found only in a few localities all the way from Massachusetts to the West Indies. Unlike other ferns in its twining habit, it has also palmate leaves, with fine lobes, and bears its fruit in a panicle, like the *Osmunda*. But we need not search out the rare ferns for specimens of elegance or beauty. The common polypody, with its minutely divided leaves, covers the sides of steep woody hills and rocky precipices, and adds a beautiful evergreen verdure to their barren slopes, otherwise destitute of attractions. The ferns and the mosses are peculiarly the ornaments of waste and desert places, clothing with verdure barren plains and rough declivities.

From the flowerless plants mankind do not derive sustenance proportioned to that afforded by the other tribes. The ferns, in the middle ages, obtained the name of "capillary herbs," from the belief that they contained a substance that would promote the growth of the hair. The active principle was an alkali obtained from the ashes. Modern experience has not proved their usefulness or their possession of any extraordinary virtues. The female fern has a mucilaginous root, which, in times of scarcity, has been manufactured into bread. An old traveller in America speaks of a fern called *Filix baccifera*, which is loaded with eatable berries; and some botanists have represented the sago plant as a true fern. These two last statements are not well authenticated. Next to the mosses the ferns are the least useful tribe of plants, with respect to their nutritive properties or their medicinal virtues.

I have always attached a romantic interest to the sea-weeds, (*Algae*,) whose forms remind one of the haunts of the Nereids, of the mysterious chambers of the ocean, and of all that is interesting among the deep inlets of the sea. Though flowerless, they are unsurpassed in the delicate arrangements of their branches, and the variety of colors they display. We see them only when broken off from the rocks on which they grew, and washed upon the shore, where they lie, after a storm, like flowers scattered upon the greensward by the scythe of the mower. When branching out in the perfection of their forms, underneath the clear briny tide, they are unsurpassed by few plants in elegance. The artist has taken advantage of their peculiar branching forms, and their delicate hues, and weaves them into chaplets of the most beautiful designs.

The seaweeds seem to be allied to the lichens, and are considered by some botanists as the same plants modified by growing under water, and tinted by the iodine and bromine which they imbibe from the sea. Like the lichens, they afford many species which are wholesome and nutritious articles of food. Among these may be named the pepper dulse, *(Fucus pinnatifidus,)* having an agreeable aromatic taste and eaten as a salad; the daber-locks, *(F. esculentus,)* used as food in Scotland; the Irish moss, *(Chondria crispus,)* and the red dulse, which is said, when roasted, to have the flavor of oysters. The laver is another of the eatable kinds, and is used as a salad and a pickle. It is useless to name the great variety of *Algae* which are palatable and wholesome. Their office in the economy of nature, according to a beneficent law that prevails throughout the earth, seems to be that of appropriating all the superfluous nutrible substances that float in the waters, thereby preserving them for the benefit of a higher race of beings.

The lichens are the lowest tribe in the scale of vegetation. They make their appearance on naked rocks, and clothe them with a sort of fringe, holding fast on the rock for security, and deriving their chief sustenance from the atmosphere and the particles of dust wafted on the winds and lodged at their roots. They have properly, however, no roots, neither have they leaves or stem; yet they are almost infinitely varied in their forms, hues and ramifications. They grow in all places which are exposed to air and moisture, on the surface of rocks, old walls, fences, posts and the branches of trees. Some of the species are foliaceous, resembling leaves without branches, and without any distinct or regular outlines, and found mostly on rocks. Others are erect and ramified like trees and shrubs, but without anything that represents foliage. Such is that common grey lichen (*Cenomyce*) that covers our barren hills, which is a perfect hygrometer, crumbling under the feet in dry weather, and yielding to the step like velvet whenever the air contains moisture. In similar places, and growing along with it, is found one of the *hepatic* mosses, that produces those little tubercles—the fructification of the plant—resembling dots of sealing wax, and eagerly sought by those who manufacture designs in moss. But the most beautiful lichens are those which are pendent from the branches of trees, (*Usnea,*) consisting of branching threads, of an ash-green color, and bearing little circular shields at their extremities. These lichens give character to moist woods and low cedar swamps, where they hang like funereal drapery from the boughs and deepen the gloom of their solitudes.

Lichens, though inhabiting all parts of the earth, are particularly luxuriant in cold climates, thriving in extreme polar latitudes, where not another plant can live. Nature seems to have designed them as an instrument for preparing every barren spot with the means of sustaining the more valuable plants. Not only do they cause a gradual accumulation of soil by their decay, but they actually feed upon the rocks by means of oxalic acid that exudes from their substance. By this process the surface of the solid rock is changed into a soil fitted for the nutrition of plants. After the lichens have perished, the mosses and ferns take root in the soil that is furnished by their decay. One vegetable tribe after another grows to perfection and perishes, but to give place to its more noble successor, until a sufficient quantity of soil is accumulated for the growth of a forest of trees. In such order may the whole earth have been gradually covered with plants, by the perishing of one tribe after another, leaving its substance for the support of a superior tribe, until the work of creation is completed.

Many of the lichens afford sustenance to man, and are useful in medicine and the arts. The Iceland moss is used as food in the cold latitudes, in a variety of forms and preparations, and was formerly prescribed, on account of its bitter principle, as a remedy for consumptions. The "tripe of the rock" is a lichen that has afforded a grateful repast to many a starving Canadian hunter. Another species dyes a fine scarlet, and is also used as a substitute for allspice. Many of them are aromatic and form the basis of scent powders. As the higher vegetable tribes, through the breathing apparatus afforded by their leaves, absorb carbonic acid from the atmosphere, it is probable that the lichens and *fungi*, many of which are known to contain peculiar chemical properties, are the natural absorbents of such mineral poisons as may be floating in minute quantities in the atmosphere, and act an important part as purifying agents.

Among the grotesque productions of nature, the *fungi*, or mushroom tribe, ought undoubtedly to be named as the most remarkable, attaining the whole of their growth in the space of a few days, and sometimes of a few hours. They are simple in their parts, like what may be supposed to have been the earliest productions of nature. They have no leaves, or flowers, or branches. They will grow and continue in health without light, requiring nothing but air and moisture above their roots. Though so low in the scale of vegetation, they are not without elegance of forms and beauty of colors, and are remembered in connection with dark pine woods, where, forming a sort of companionship with the *Monotropas*, they are particularly luxuriant. Neither are they deficient in poetical interest, as these plants are the cause of those fairy rings that attract attention by their mysterious growth in circles on the greensward in the pastures.

The mushrooms vary extremely in their forms and sizes. Some are as slender as the finest mosses, tinted with gold and scarlet, and almost transparent. Others resemble a parasol, with their upper surface of a brilliant straw-color, dotted with purple, and their under-surface of rose or lilac. They seem to riot in all sorts of beautiful and peculiar shapes and combinations. But the greater number are remarkable only for their grotesque forms, as if intended as a burlesque upon the other productions of the earth. Almost every tree, after its decay, gives origin to a particular species of mushroom. They are often seen as small as pins, with little heads resembling red and yellow beads, growing like a forest under the moist protection of some broad-leaved shrubbery. Over the surface of all accumulations of decayed vegetable matter they are seen spreading out their umbrellas and lifting up their heads, often springing up suddenly, as if by enchantment. But they are short-lived, and soon perish if the light of the sun is admitted into their shady haunts.

The Russians are said to eat almost every species of mushroom, destroying by a culinary process their injurious qualities. Many of the species, however, are virulent poisons, and are unsafe under any mode of preparation. The edible sorts are of an agreeable and sometimes aromatic flavor, and sufficiently nutritious to be used as articles of food. Among these are many species of the agaric, and of the truffles that vegetate under ground, and in France and Italy are hunted by hogs, or by dogs trained for that purpose. Several kinds are used for medicines and condiments.

Thus far have I endeavored to call attention to the flowerless plants, not designing to treat of them in a scientific manner. I have said nothing, therefore, of the *Characeæ* and the *Equisetums*, lest I make useless repetitions of remarks which are necessarily of a general character. Whoever will take pains to examine these plants will discover an inexhaustible variety in their forms, their modes of growth, and their fructification. Hence those botanists who have given particular attention to this class of plants have been noted for the enthusiasm with which they pursued their researches. I have never been initiated into the mysteries of their life, growth and continuance. I treat of them only as they serve to add beauty to a little nook in the garden, to a dripping rock, or to a solitary dell in the wildwood. The more we study them, the more are we charmed with their singularity and elegance.

Thus over all her productions has nature spread the charms of beautiful forms and tints, from the humblest mushroom that grows upon the decayed stump of a tree, or the lichen that hangs in drapery from its living branches, to the lofty tree itself that rears its head among the clouds. It is not in all cases those objects which are most attractive to a superficial observation, that furnish the most delight to a scrutinizing mind. The greatest beauties of nature are hidden from vulgar sight, as if purposely reserved to reward the efforts of those who, with minds devoted to truth, pursue their researches in the great temple of science.

Beverly, June, 1854.

ART. III. *The Cultivation of Endive and Chicory.*

THE cultivation of salads, though greatly upon the increase in our country, is yet confined principally to lettuce and celery. These two are in great demand in our principal markets, and large quantities are raised for the supply. The former is produced at all seasons, both summer and winter, and the latter from autumn until spring. They constitute the main stock, and when one or the other is not to be had, there appears to be nothing to take their place. On the Continent, particularly in France, endive, chicory, purslane, mustard, cresses, corn salad, chervil, &c. &c., are grown to great extent, and, with the more common salads, form an important item in the food of the people. The rich eat them as a luxury, and the poor from necessity. The use of salads is of the remotest date, and they are considered, especially in warm countries, as an important and healthy diet.

In the markets of New York and Philadelphia there is a far better supply of the various salads than in Boston. Chicory and endive are both grown to considerable extent, and their use is daily increasing. The greater number of German and French population, who are there in quantities, creates a good demand, and many of the market gardeners in the vicinity of the former cities, being Germans and Frenchmen, they are acquainted with their cultivation, and are enabled to produce them at all seasons of the year. At present, their use is confined mostly to the rich and opulent, who consider them as great luxuries.

To aid, therefore, in the introduction to general cultivation of a greater variety of salads, particularly endive and chicory, we lay before our readers two excellent papers, which we copy from Mackintosh's *Book of the Garden*, giving the details of the growth of both, as practised by the best market gardeners around London, who furnish large quantities for Covent Garden. This is just the time for sowing the seeds for next year's supply, and if the directions are properly followed, a fine crop of either of the two may be obtained the ensuing spring. We would particularly urge upon the more industrious and active market gardeners in our vicinity the importance of cultivating and introducing these two excellent salads:—

ENDIVE.

Propagation.—In a cultivated state it can only be regarded as an annual, and is therefore propagated by seed, which is light, and vegetates freely: half an ounce of seed will sow a seed-bed of 40 square feet.

Sowing and planting.—The earliest crop should be sown in May, on a warm border, in rich and well pulverized soil. In sowing, scatter the seed thinly, and cover to the depth of a quarter of an inch. If sown earlier, the plants are apt to run to seed in autumn; and if sown too thick, they come up slender, and if not timeously thinned, are much retarded in their growth. For principal crops, sow twice in June and twice in July; and for a late crop to stand over winter, if mild, and to come in early in spring, sow again towards the middle or end of August.

The seeds may be sown broadcast in beds three feet in breadth. In dry warm weather water freely, both while in the seed-bed and nursery plantation. As bulk of vegetable and tenderness in texture, as in the case of the lettuce, are the great requisites, every stimulus should be given to increase the rapidity of growth, and this will be accelerated by the application of liquid manure, such as dissolved guano, soot, or pigeons' dung, applying it either early in the morning or late in the afternoon. When the plants are about 2½ inches high, remove them carefully, and transplant them into another bed of equally enriched soil. Set the plants from 3 to 4 inches apart each way, water at planting, and afterwards if the weather is dry. From this bed they may be transferred, when about 4 to 5 inches in height, to where they are to come to their full size. The early crop should be sparingly planted, unless the demand is great, as they are very apt to shoot up to seed, more especially if the seed is of last year's growth. A part of this early crop may be planted on a warm well-exposed border, and the remainder interlined with newly-planted-out broccoli or cabbage, or between rows of dwarf pease, the partial shade being of advantage to them, and in some degree preventing their running to seed prematurely. In taking up for final transplanting, great care should be taken that the roots are disturbed as little as possible, and that as much soil as will conveniently remain about them be also taken along with them—and for this purpose the planting trowel should be used, instead of the dibber. As the plants are taken up, set them closely together in the planting-tray, with their leaves upright, and on no account follow the barbarous practice of cutting the leaves off nearly by the middle. The planting-tray is a light shallow box, about 27 inches in length, 18 inches wide, and 3½ inches in depth. In the sides should be cut two slits sufficient to introduce the fingers, for greater convenience in carrying it to the place of planting. Such trays are much better than baskets, as they prevent the loose earth falling on the walks, protect the roots better from the air during their transport, and are more economical on account of their greater durability. The ground for the principal crops should be open and well exposed to the sun, thoroughly manured, and dug or trenched to the depth of two feet. Draw drills from 12 to 15 inches apart, according to the kind of endive to be planted, as some, like the Batavian or broad-leaved sorts, require more room than the green-curled, and those to be used early in autumn may also be set closer together than such as are to remain till a later period. The drills should be three inches deep, which, by the earth falling into them during the process of hoeing, &c., will assist in blanching the crop; they also render the process of watering more convenient, and economize the fluid, and afford, as in all cases of drilled crops, greater facility for cleaning the ground and stirring it up, upon which so much of the success of all crops depends. The plants, according to size, as stated above, should be planted with the trowel, at from 9 to 14 inches apart in the row; if the ground is in proper condition, this will not be found too great a distance; if otherwise, a less distance will suffice.

In all cold and late situations, the warmest spot in the garden should be set apart for this crop, as it is, with the exception of the kidney bean and potato, the most tender of all our ordinary esculents. The shade of trees should be avoided, and for the latest crops of all, a dry place, and if possible sloping to the south, should be chosen.

Subsequent cultivation.—The summer crop will require nothing more than attention to watering, and keeping the ground clear of weeds, until it has nearly attained its full size, when a portion of the crop should be blanched; but this should not be done all at once, only in progression—say from 20 to 50 plants about every third day. The methods of blanching are various. The Belgians, who are the best growers of this crop in the world, commence at the end of a row, and, taking the leaves carefully up with both hands first, hold them tight with the left hand, and with the right hand apply a small willow twig, and frequently a leaf of *Juncus glaucus*, which they use largely for all temporary tying purposes, round the leaves at top, thus causing the large outer leaves to blanch the more tender ones towards the heart of the plant. They are methodical in all their gardening operations; and so, in this case, they thus tie up as many plants as will last for six days, at the end of which time they begin to gather the crop, which will be beginning to blanch, and will every day be improving. They take up as many as they require for the day's consumption, and with the twigs or rushes now disengaged, they proceed to where they left off tying at first, and tie up as many more as they have that day taken for use; and in this way they go on throughout the whole crop. They also sometimes draw a little earth about the plants as we do, but they prefer the former practice.

The English practice in market gardens is to tie up in the same way, using strands of matting instead of twigs or rushes, performing the operation once in eight or ten days. This operation should in all cases be attended to in dry days, or when the leaves are completely free of damp from rain or dew. In private gardens the same plan is followed, though, in some cases, they draw earth around the plants when both are in a dry state, and thus effect the end, although not so completely. Indeed, when the earthing-up system is to be followed, it will be found expedient to tie up the leaves first, and therefore, if this is done properly, earthing up must be superfluous. By tying up the plants while quite dry, drawing the leaves up in a conical form, and tying them tight about three inches under their tips, damp is prevented from getting to the hearts, and no deterioration can take place in the flavor; and therefore we would say, for summer crops, this is the better way. For autumnal supply, when the weather is less favorable, and every means should be employed to prevent decay taking place, in consequence of damp, in private gardens at least, the endive blanching-pot should be used. These are merely modifications of the sea-kale blanching-pot, diminished in size; and as there is no occasion for a portable top or lid to enable the cultivator to examine his crop, they are made all in one piece, having a knob at top to serve as a handle for lifting them off or on. They are from 9 to 12 inches in diameter, and the same in height; are placed over the plants when nearly full grown, the leaves being gathered up with one hand, while with the other the pot is placed over them, so as to enclose them completely, and thus insure their blanching, while they are protected from frost, snow, or rain. The curled-leaved varieties are much more readily blanched than the broad-leaved or Batavian sorts, therefore a corresponding degree of care is required in performing the process. As to the length of time required for blanching, much depends on the season. During summer, while the plants are growing vigorously, the process will be effected in a week; while towards autumn, and during winter, when vegetation is more sluggish, double or treble that time will be required. The other means employed are to invert empty flower pots over the plants, taking care to stop up the holes in their bottoms, laying a slate or pan-tile over each plant, particularly the green curled sorts: the Batavian, from its difference in habit, does not admit of this process. Setting two long narrow boards along each side of the row, and bringing them together at top in form of a triangle, and afterwards drawing earth over them to keep them steady; covering the dwarf-growing sorts with half-decayed leaves, dry tanners' bark, sand (a method in use in the days of Gerard), coal ashes, or even sawdust, are all had recourse to; but all of these, as will readily be seen, are far inferior to using the blanching-pot, or even the tying-up process.

For protection during winter, the London market-gardeners take up their latest crops, and set them thickly on sloping banks, by the sides of hedges, for the sake of shelter; while others throw up long narrow ridges, in an east and west direction, and plant both sides, which produces a succession—those on the southern side coming in first, while those on the opposite side, if later in arriving at perfection, have often the advantage over the others of withstanding the winter's cold better, being less influenced by the freezing during night, and rapid thawing during the day.

Partial shelter may be afforded the plants during winter, when planted in the open garden, by sticking the ground between and around them with old pea-stakes, branches of trees, furze or broom branches. This wards off cutting winds, and catches the perpendicular frost as it falls; but, in using such means, they should be stuck firmly in the ground, to prevent their being blown about so as to injure the plants by friction; neither should they be above two feet in height, as the lower they are the less effect the wind has upon them.

The best way, however, to secure fine endive during winter, is to take the full grown plants up in November, or before severe frosts set in, choosing a dry day, and when the leaves are also dry. Tie the leaves loosely together with matting, first removing a few of the largest and oldest outside leaves; take them up with good balls of earth attached to them, and carry them to the conservative pit, or the span-roofed vegetable pit, and plant them in moderately dry sand, in half-decayed peat earth, if it can be procured, which, on account of its antiseptic properties, will resist decay longer. They should be placed closely together, but not so close as to touch each other. In the one case, they will be kept perfectly dry, in consequence of the permanency of the roof, while ample ventilation is secured by opening the sides. In such a structure they will enjoy almost as much air as if in the open ground, while they will be completely protected from damp and frost. The conservative pit offers also an excellent means of keeping endive, and all similar plants, if taken up with balls, and planted in it. The boarded roofing, which is in convenient pieces, keeps the interior dry, while light and air, when wanted, can be fully admitted by propping it up. All places for the purpose of keeping esculent vegetables during winter, should be placed in a dry, airy situation, and with a northern aspect, so that the sun may rarely shine upon them. During their season of hibernal existence, every stimulus to growth should be guarded against. We have recently constructed a very useful pit for this purpose, 150 feet in length, and 7 feet wide. It is simply a brick wall, 15 inches in height, built parallel with an existing north wall, covered with standard or Ridder Morello cherries, the branches of which are three feet from the ground. A batten of wood, with notches cut out opposite the stems of the trees, is fastened to the wall by holdfasts at that height; to this, and to the wooden wall-plate on top of the front wall, the rafters are fixed, at the distance of 3½ feet, which is the breadth of a great portion of our glass lights and felt shutters, that either may be employed if necessary. For protecting lettuce and endive the former are not required; and the latter, during winter, are mostly in use for covering over the glass lights of pits, &c., during the night. As a covering for this pit, we employ the boarding used as portable coping to the garden walls, which, during winter, is not required. These are laid upon the rafters in an imbricated manner, but not fixed to them, but they are secured to each other by cords every six feet, after the manner of Venetian blinds; but instead of drawing up, like them, they are folded up, the one over the other, when air is wished to be admitted, or when it is necessary to open them to take out the supply, remove dead leaves, &c. When the plants are fully grown, they are removed from the quarter, tied up, and planted in rotten tan within the pit; the boarding is put on, and the whole safely secured. We have never had so fine a supply of endive before as we have this season, and we are still cutting, on the 10th of March, that which was put in the first week in November.

Soil and manure.—The object being to produce the largest amount of vegetable matter and in the shortest space of time, it follows that the soil cannot be too rich, or in too high a state of cultivation for this crop. Beyond the application of stable-yard manure, as usually applied, we use no other manure, save that at every watering we enrich the liquid by the addition of guano, soot, or pigeons' dung, and occasionally ammoniacal liquor, or the water through which gas passes during the process of purification, which appears to be an excellent manure for most garden crops, but cannot everywhere be procured. It should, however, be understood that this liquor is not gas tar, which of itself would have very opposite effects.

Taking the crop, and subsequent preservation.—Endive is always used in a blanched state, both for appearance and to get rid of a certain natural bitterness contained in the green leaves. It is divested of its outer, coarser, and unblanched leaves and roots, with any points of the remaining leaves that may have been injured, or have begun to decay. It is then thoroughly washed, rinsed afterwards in clear water, or in salt and water, allowed to drip dry, and placed in a clean basket fit for use. The preservation of the crop being so connected with its subsequent culture, for that the reader is referred to the last paragraph.

Forcing.—Endive is rarely forced in Britain, our chief dependence being placed on the preservation of the preceding year's growth over winter. The truth is, with all our affectation for French coqkery and salad-eating, we are a vast stride behind our neighbors on the other side of the Channel in both. They force endive and we do not. Their mode of proceeding is thus given in the *Bon Jardinier*, which contains all that is new in French gardening: "For early-forced scarole (broad-leaved or Batavian endive) the seed is sown in January, under glass, in a strong heat. After the seeds have vegetated, and the plants are fit to handle, which will, in general, be from twelve to eighteen days after sowing, they are pricked out on another hotbed, at a lower temperature than the last, ventilation is attended to, and in course of the end of February and during March the crop is ready for use. The plants, of course, are small compared to those grown by us in the open air, but they are produced in great number on account of the extent of framing every garden contains, and the abundance of stable-yard manure procurable, by which almost all the forcing in the market-gardens about Paris is carried on. When the scarole has attained the height of 6 or 8 inches in the frames, it is tied up to blanch, which it does in a few days. Sometimes they sow the seed in October, in a bed with a mild bottom heat, and afterwards prick out the plants into a similar bed, placing them at the distance of about six inches asunder, either under glazed sashes supported on frames, or under *cloches* or large bell-glasses, placed close together on the heated material. These they cover in severe weather with *paillissons* or straw mats, which they very properly prefer to Russian mats, the most indifferent of all protections, warding off neither cold nor wet in so efficient a manner. We have a third mode, by sowing about the middle of September in a cold frame; in about three weeks, the plants are of fit size to prick out under glass to gain strength, after which they are transferred to a glass frame, set pretty thickly together, and protected from cold by ample coverings alone." It will be understood that these crops are not intended to attain the same size they do with us, but are cut for use while quite young and tender; and by such means we might obtain a better supply of young lettuce for winter use than we do by growing them in boxes, pots, or pans, in the high temperature usually done. This mode, however, imposes a great amount of labor in covering and uncovering; and from the high price of labor with us compared with that of France, it would hardly pay the commercial grower. In some few private gardens, such supplies, both of lettuce and endive, are kept up; but, in general, the demand for glass is so great with us for other purposes that few private families would afford the necessary means. Winter salad-growing is the *beau ideal* of the French gardener; his mind is, as it were, concentrated on it, and indeed he has little else to think of. Not so with those of Britain, whose winter operations are far more multifarious, besides the difference of climate.

Approved sorts and their qualities.—The endive, like the lettuce, is divided into two very distinct classes—the Batavian or broad-leaved, (the Scaroles of the French, the Breitblattrige-endivie of the Germans,) and the curled-leaved, (the

Chicorée of the French, the Endivien-cichorie of the Germans.) An excellent paper was published some years ago, in the 4th vol. of the "Transactions of the Horticultural Society of London," on the varieties of endives. The French seed-lists contain many names; those of Britain contain few, and of those, three or four are all that is in general inquired for.

The broad-leaved Batavian and small Batavian are the only two broad-leaved sorts worth the attention of the general cultivator. The former is known also as broad-leaved endive, common yellow, and double yellow; the latter is the Scarole petite, Scarole courte, Scarole ronde of the French. The former is that most usually grown, but, from careless seed-saving, is not always to be procured genuine. The latter has the following merits, which are worth notice, and are thus given by Mr. Thompson, from specimens grown in the London Horticultural Society's garden: "Leaves pale green, broad, of moderate length, slightly ragged at the edges; inner leaves hooked at the top, naturally forming a good heart; blanching with little trouble, and is mild and sweet compared with many others." Nearly allied to the broad-leaved, but inferior to it, is the curled Batavian, fine-curled and yellow-curled Batavian, which are all the same.

Large green curled.—An excellent sort, differing from the following only in being somewhat larger in size, and in having its outer leaves more upright. It is known as the green curled yellow winter endive.

Small green curled.—With the last, the two best of their class, and most extensively grown. Leaves about six or seven inches long, beautifully curled, the outer leaves lying close to the ground, the inner ones thickly set, forming a compact heart, easily blanched, very hardy, and, with the last, best adapted for winter use. It is the Chicorée frisée, Chicorée de Meaux, Chicorée endive of the French.

White curled.—This sort is much used by the French for cutting young, as described in paragraph *Forcing*. The full-grown leaves are nearly eight inches long, and when grown in the open air they seldom or never form a heart, and are besides tough and bitter. It is the Chicorée blanche, Chicorée toujours blanche, of the French. Certainly not worth cultivating for a general crop.

Small French green curled.—This sort is much cultivated in France for the earliest crop, hearting early, and being less liable to run to seed than some others. It is so small and so prostrate that it is difficult to tie up. It is known as the fine-curled, and is the Chicorée fine d'été, Chicorée frisée fine d'Italie, and Chicorée d'été, of the French.

CHICORY.

The mode of propagation is by sowing the seed. A quarter of a pound will be sufficient for an ordinary private garden, as it is light, somewhat like endive, to which it is closely related.

Sowing and planting.—The seeds are sown, towards the end of June, in rich, deeply-trenched ground. Sow thin, and cover about one quarter of an inch. When the plants come up, thin them to the distance of 6 or 7 inches apart, transplanting those thinned out into another piece of ground, equally manured and trenched, to allow the long fusiform roots to extend deep into it. Some sow, after the Flemish manner, in the broadcast way, and transplant on the same system. The drill mode is, however, better in both cases: the drills should be 9 inches apart, and the plants 6 inches distant in the row; for the stronger the plants are, and the more room the foliage has for development, the more elaborated matter will be thrown into the roots; and it is this prepared matter, stored up in them during their growing season, that will supply the means for the young coming leaves during winter forcing, for they of themselves can collect little or nothing towards the support of the crop.

Subsequent culture.—About the beginning of October the roots should be lifted, the leaves being carefully cut off, but not so close to the crown as to endanger the hearts of the plants. Amateurs had better leave three inches of the base of the old leaves to prevent accident. The roots are then planted as thick as they can well be done in a bed of sand on the floor of a mushroom house, packing the sand closely about them, and, when finished, giving a good soaking of tepid water. Old boxes may be filled with them, and casks, as is usual on board of ship, having their sides perforated with holes 1½ inches in diameter, and 7 or 8 inches apart. Lay a few inches of sand in the bottom of the cask, and on that lay the roots horizontally, with their crowns in the centre of the holes; on this layer of roots lay more sand and roots, until the cask is filled, watering each layer of roots as they are covered with the sand. Large flower pots may also be used, or indeed anything that will keep the sand together. It may be convenient to fill many of these at once; and by placing them in a dry cellar, or open cool shed, they will remain for a month or two stationary. For the first gathering, one or more of these should be removed to a warmer place, where a temperature of from 45, 50, to 60 degrees can be maintained, and where light can be completely excluded. In a week afterwards place another supply in, and so on during winter, or as long as the stock of roots lasts. They will seldom afford more than one gathering, and may be then thrown away, and the boxes or casks filled again with roots from the open ground. In this way a constant succession of salad may be kept up from the beginning or middle of November till April. Some recommend taking up all the crop of roots at once: this is unnecessary, until the beginning of February, when they will begin to become naturally excited into growth. It is expedient then to remove them to a bin of sand in the cellar, or to bury them deep in the ground to prevent their growth. It is also recommended by some to shorten the roots and remove the side fibres; but this is only cutting off the resources of the plant, and lessening its means of producing a crop of large succulent leaves.

This excellent and wholesome salad was, we believe, first brought into notice in Covent Garden market by the indefatigable Mr. Cuthill, who, in 1839–40, carried the first sample of it which appeared there in his own hand. It was in consequence of a letter from that individual, published in "The Gardeners' Magazine," about fifteen years ago, that this plant was first grown as an article of field culture, for the purpose of its roots being used for mixing with coffee. This is somewhat strange, seeing that it has been a common marketable article on the Continent time out of mind.

Mr. Cuthill sows his chicory about the first of June, either broadcast or in drills. When the plants are up, they are thinned out to a foot apart, and the ground is kept free from weeds. The roots are taken up in November, and stored by exactly like beets. When endive becomes scarce, the chicory roots are planted in 16-sized pots, five roots in each. When the chicory begins to spring, invert 24-sized pots over those the roots are in; exclude the air, and place them in a forcing house or frame: each pot will afford three or four cuttings. A dark mushroom-house, where a fire is kept, is an excellent place for chicory; and a cellar is good for spring crops, but seldom warm enough, if not artificially heated, to depend upon for a regular winter supply.

The Belgians and Dutch blanch immense quantities of chicory during winter and spring; indeed, it forms one of the most prominent articles in their vegetable markets for several months together: The roots are taken up in autumn, and all the larger ones selected; they are then placed in a bed, almost as close as they can stand together, with merely a little earth to fill up the spaces between them, experience having taught the Belgian gardener the important fact pointed out theoretically by Mr. T. A. Knight, that the new annual supply of leaves of plants of this description is derived from the stock of sap elaborated in the preceding year, and requires nothing from the soil but moisture. Upon the bed of roots thus closely packed together and defended from frost in winter, a slight hotbed of manure is laid in spring, with six or eight inches of earth interposed. Into this earth the leaves shoot, struggling for light and air, and becoming perfectly blanched and crisp, and losing most of their natural bitterness. With us who have greater convenience in the shape of heated cellars, or other places capable of having light completely shut out, we manage better, by planting the roots in beds on the floor, and thus produce the crop at less risk and greater certainty as to time, without half the labor. Planting in large pots or in boxes, and inverting pots or boxes of the same size over them, and setting them on the floor of a vinery, and behind the hot-water pipes or flues where they exist, or indeed in any out-of-the-way place where there is a temperature from 50 to 55 degrees, and exclusion from light, will secure this excellent winter and spring salad in great perfection, and with little trouble.

Those who desire it during spring may readily blanch it in the open ground, leaving some roots where they grew, and placing sea-kale or endive pots over them. They will continue to yield a crop until they begin to run to seed.

Taking the crop.—Each head of leaves is cut when seven or eight inches long, taking with them a thin slice of the crown to keep them together, as in cutting sea-kale. When washed and tied up into small bundles of a handful each, they are fit for dressing. Three handfuls will make a good-sized salad, and may be eaten alone with oil and vinegar, or mixed with a little chervil and tarragon, or with young lettuce.

Sorts and their qualities.—The Continental growers profess to have three sorts—the common large-leaved, the Chicorée à navet, or Café-chicorée, and the variegated.

General remarks.—The European names are, Chicorée sauvage in French; Cicoria in Italian; Gemeine cichorie in German; Suikerei in Dutch; Achicoria in Spanish. In saving seed, select some of the strongest roots that have not been forced; support the flower-stalk as it advances, and cut them over when flowering is done, and treat them as recommended for lettuce. The seed will keep three or four years.

How to use Endive.—The leaves are the only parts used, and these only when blanched, to diminish the natural bitterness of taste. It is one of our best autumn, winter and spring salads, and is also served much in the same way as lettuce.

How to use Chicory.—The leaves are blanched, and used as one of our most popular salads. In Belgium, the roots are scraped and boiled and eaten along with potatoes, or with a sauce of butter and vinegar.

ART. IV. *Flower and Bulb Gardens.*

By the EDITOR.

THE bulb or "Dutch flower garden" forms one of the most interesting features among the whole range of floral objects of which our gardens can boast. From the first appearance of

> "The snow drop, who, in habit white and plain,
> Comes on, the herald of fair Flora's train,"

until the tulip, with its gaudy coloring, has cast its many-tinted petals, the bulb garden is one mass of beauty, brilliancy, and sunshine of bloom. What more charming in the early spring, when nearly everything is yet cheerless with frost and snow, than the green carpet beneath the drawing-room or parlor window, looking to the south, gay with the blossoms of the crocus, with their white, blue or yellow petals broadly spread to catch the first rays of the vernal sun. How bright the daffodils, with their flaunting yellow petals, exhaling their honied odor; and in what pompous majesty succeeds the crown imperial, with its red or yellow pendent corols, and its leafy crown above, disdaining, apparently, the company of its humbler companions. Then the fragrant hyacinth, whose stately spikes of fragrant flowers make the air redolent with their odor. All—every one—are beautiful, and doubly valuable, because they brave the cold and storms of early spring uninjured, and fill a gap in the round of seasons which, without them, would be the least interesting of the year.

Young as our country is in the art of gardening, we do not expect to see such examples of select and highly-kept flower grounds as are to be found in Great Britain, where the art has been carried to so much perfection. In due time no doubt we shall have a nearer approach to them than is to be seen now. They require unusual care and attention, with no inconsiderable amount of labor, to render them perfect and beautiful; but where these are bestowed upon them, no part of a suburban residence affords more gratification than the "Dutch flower garden."

In our last volume we gave two or three plans for flower gardens, each of them exceedingly pretty, and of various extent of ground. We now present a copy of that somewhat old, or perhaps we should say familiar one, as it has so often been alluded to or described in horticultural books, the Dropmore Flower Garden, *(fig. 15.)* It is one of the best designs, as a whole, we have ever yet seen, and it only needs to be inspected, as we saw it in October, 1844, to be pronounced unique of its kind, and well deserving of imitation wherever a flower or bulb garden is to be made. Originality we admire in everything; but the lines of beauty in ground are so hard to create, that it is far better to imitate that which is perfect, than to attempt anything new and fail in its performance.

We are aware that there is a very prevalent opinion that anybody can design a flower garden; geometrical generally in its shape, composed of an assemblage of small beds, it is supposed the simplest thing imaginable to mark out the ground. But we must most respectfully dissent from this opinion. A group of beds is not a flower garden; something more is necessary than this; and we cannot omit the opportunity to state that this is the fatal error into which so many amateurs and gentlemen forming suburban residences fall. A few square, diamond or other regular shaped beds may be very easily staked out; but the moment the beds assume an irregular form, and are to make part of a great whole, then the labor becomes difficult, and the principles of composition are called into action; and as no one bed can be made without reference to all the others, a general knowledge of the art of design is requisite to give them an easy, graceful or harmonious arrangement. A simple glance at the Dropmore garden, as compared with the generality of flower gardens of the same kind, will explain all we have advanced on this subject, and illustrate the importance of the taste and knowledge required to lay out a beautiful parterre.

Gardens of this kind may be rendered ornamental the whole season, from April to November. They may be so planted as to have a display of bulbous flowers from April to June, and these to be succeeded by annuals or bedding plants, a combination of the two, or even bulbs, annuals, bedding plants and perennials together. When this plan of

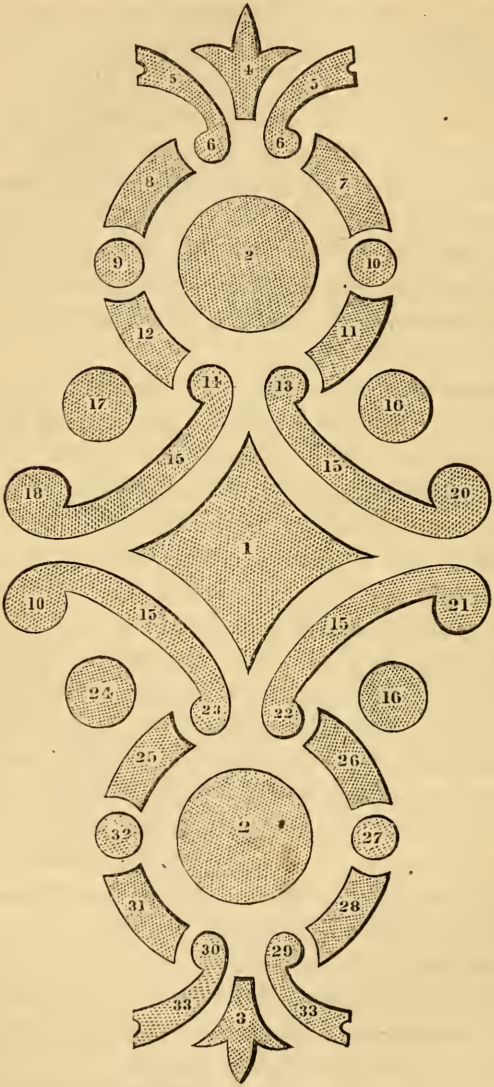

Fig. 15. *Plan of the Dropmore Flower Garden.*
Scale, 32 feet to the inch.

the Dropmore garden first appeared in *Loudon's Magazine*, in 1828, the Verbena melindres, and its numerous seedlings, now so admired, were not known; the Portulacca had not been introduced; the Plùmbàgo Larpéntæ, the beautiful lantanas, and many other fine plants, could not then be obtained. The principal plants then relied upon for summer blooming were geraniums, heliotropes, roses and annuals. How much more varied and magnificent the display now; and from the ease with which these new plants are cultivated, how much better the show can be kept up by having a reserve stock in pots ready at any time for turning into the ground!

In presenting this design, we have therefore omitted the lists of plants and bulbs which accompanied it, but in their place give two of our own, substituting the kinds now so much esteemed for bedding for those originally selected. The selection may be varied to any extent, so numerous are the varieties of verbenas, petunias, and other plants; but the same principles of grouping in colors must be attended to, or the effect will be greatly marred:—

1. THE BULB GARDEN FOR SPRING.

1. Iris of various colors, edged with crocuses.
2, 2. Double or parrot tulips, edged with white and blue crocuses.
3. Early single tulips.
4. Early single tulips.
5, 5. Narcissus, (double.)
6, 6. Snowdrops.
7. Hyacinths, double blue.
8. Hyacinths, double white.
9. Crocuses, white.
10. Crocuses, blue.
11. Hyacinths, double red.
12. Hyacinths, double yellow.
13. Snowdrops.
14. Snowdrops.
15. Tulips, single, various colors; all four beds (15) the same.
16, 16. Crown imperials, bordered with white crocuses.
17. Crown imperials, bordered with blue crocuses.
18. Anemones, various colors.
19. Anemones, various colors.
20. Anemones, various colors.
21. Anemones, various colors.
22. Snowdrops.
23. Snowdrops.
24. Crown imperials, bordered with crocuses.
25. Hyacinths, single blue.
26. Hyacinths, single red.
27. Crocuses, blue or mixed colors.
28. Hyacinths, single yellow.
29. Snowdrops.
30. Snowdrops.
31. Hyacinths, single white.
32. Crocuses, white or mixed colors.
33, 33. Narcissus, double.

All these will be entirely out of bloom so that the bulbs may be taken up by the 20th of June, or the 30th at the latest. The ground should then be thoroughly dug over, and the beds filled with the following, which should be well established in pots, so as to come immediately into flower. The bulbs should be planted again from the 1st to the 10th of November:—

2. THE FLOWER GARDEN FOR SUMMER.

1. Tea and Chinese roses, light colors, bordered with Roi de Cramoise or Fabvier.
2, 2. Scarlet geraniums, bordered with Oxalis rosea.
3. Verbena Indigo, purple.
4. Verbena Hyperion, blue.
5, 5. Lantana americana, orange.
6, 6. Verbena lilacina, lilac and white.
7. Heliotrope grandiflora, light.
8. Heliotrope Voltairianum, dark.
9. Verbena Defiance, scarlet.
10. Verbena Phenomenon, scarlet.
11. Petunia Hebe, variegated.
12. Petunia Eclipse, variegated.
13. Pansies, fine sorts of var. colors.
14. The same.
15. Portulacca, (4 beds,) one bed of white, one yellow, one red and one scarlet.
16, 16. Salvia fulgens, scarlet, bordered with S. patens, blue.
17. Salvia coccinea, scarlet, borderde with S. patens.
18. Plumbago Larpentæ, blue.
19. Lantana Selowii, purple.
20. Plumbago Larpentæ, blue.
21. Lantana Selowii, purple.
22. Pansies of various colors.
23. The same.
24. The same as No. 17.
25. Petunia Yorkville Beauty, rose and white.
26. Petunia rosea, rose.
27. Verbena America, white.
28. Heliotrope Gem, dark.
29. Lantana rosea, rose and yellow.
30. Lantana camara, yellow and red.
31. Heliotrope Reptans.
32. Verbena Bride, white.
33, 33. Lantana americana, orange.

This list can be greatly varied, but the above will form a rich contrast of colors; and if properly managed, by the middle of July the beds will present a mass of flower.

Another list might be made composed of bulbs, perennials, annuals and bedding plants; the bulbs to remain without removal three years; the perennials set out between them, with sufficient space to bed out plants; the annuals growing immediately among the bulbs without injuring them, unless very rare sorts, which need not be used, as the common showy ones are just as good. The only objection to this arrangement is, that for a time the dead and decaying leaves of the bulbs look bad among the green and healthy foliage of the annuals and perennials; still, if a little attention and some labor is no object, this plan will afford the most continuous bloom.

Good taste and little judgment on the part of the amateur or gardener, will enable either to make a flower garden of this kind charmingly beautiful all the season.

In conclusion we should add that all the beds should be edged with box, and the walks neatly gravelled.

Art. V. *Floricultural and Botanical Notices of New and Beautiful Plants, figured in Foreign Periodicals; with descriptions of those introduced to, or originated in, American Collections.*

New Gloxinias.—A fine variety of these beautiful plants are now in bloom in our collection, and present a gay and lively appearance, just at this season when there are so few showy flowers in bloom in the greenhouse or conservatory. The following are a few of the newest:—

G. Fyfiana grandiflòra. Flowers large, of a light blue, with the entire inside of the corolla shaded with purple; erect habit, the flowers elevated, and standing partially upright.

G. Marie Van Houtte.—Flowers medium size, creamy white, with the deepest carmine throat; very superb; habit of speciosa.

G. monstròsa.—Flowers large, French white, with deep bluish violet throat; habit good.

G. Wortleyàna.—Flowers large, white, with a violet spotted throat, distinct and fine; habit tall, with leafy stems, and the flowers form the axils of the leaves.

G. Passinghamii.—Flowers medium size, deep blue purple; habit like Wortleyàna; fine.

G. Hoogèven.—Flowers medium size, pale blue, with white throat; very free bloomer, and good habit.

G. Mercèdes.—Similar to G. Hoogèven, but with a tall, leafy habit, like Wortleyàna.

G. Professor Decaisne.—Flowers medium size, carmine, with a white throat; habit good; a beautiful variety.

Several other new ones are coming into bloom, which we shall notice hereafter.

Lantaˋna roˋsea.—This is the name of a new and pretty variety, with the habit of americàna, but with yellowish citron colored flowers, changing to a beautiful rose. It is one of the best, and admirably adapted for bedding out with the other low growing sorts.

Myosoˋtus azoˊricus.—Every body admires this pretty little pale blue flower, the Forget-Me-Not, (M. palustris.) M. azóricus is a new species, of a much stronger habit, with stouter stems, growing a foot high, and covered with deep azure blue flowers, exceedingly beautiful, and forms a strong contrast with the former species. It is easily raised from seeds, and requires only the protection of a frame in winter.

Phlox depressa var. Criterion.—This is a new and superb striped phlox, raised by the French florists. It was obtained by hybridizing the depréssa (a hybrid of Drummónd*ii*,) with one of the hardy kinds. It is a perennial, easily cultivated, and very vigorous. It requires the protection of the frame, or a greenhouse, when it will flower all winter. In summer it may be bedded out, when it will also bloom profusely till autumn. It is a great acquisition.

New Scarlet Geraniums.—Great improvements have been made in this showy class during the last few years. The English cultivators have raised many new and distinct seedlings; but more recently the Parisian cultivators have given attention to them, and have already produced some superb varieties, two of which we have had in full bloom all the spring. These were raised by M. Domage, and carried off the highest prize at the exhibition of the Horticultural Society of Paris. Their colors are new, and the form of the flowers perfect. We give a brief description of them.

Chas. Domage, (Domage.)—Plant very vigorous, leaves of a deep glaucous green, with a circle of brown, and the centre pale green; flowers in large clusters, of a salmon orange, quite new, very distinct and superb.

Rubens, (Domage.)—Plant very vigorous, leaves very green, with a circle of brown and pale green in the centre; flowers large, cherry scarlet, and finely formed; clusters large and fine.

New Verbenas—Mr. Geo. C. Thorburn, Newark, N. J., offers for sale several new and fine Verbenas, among them the following:—

Anna Cora Mowatt.—Rosy purple, shaded with crimson; very large flower, immense bloomer, and fine foliage.

Fair American.—Clear white, with black eye, an improvement on Thalia, very free bloomer, and fine habit.

Salamander.—Grand scarlet, black eye, very dwarf spreading habit, immense bloomer, throwing the flowers well above the foliage.

Lilac Queen.—Clear lilac, shaded with purple, very superior in every particular.

These are all American seedlings, raised, we presume, in New York or New Jersey.

Fancy Pansies.—Notwithstanding the long time the Pansy has been elevated to the rank of a Florist's flower in England, and the innumerable seedlings which have been produced, it does not appear to have departed from its general style of coloring, being either self-colored, edged, or mottled. The French and Belgian amateurs, however, have been successful in raising what they term Fancy Pansies, (*Pensées de Fantaisie*,) which possess a peculiar beauty, and hold the same relation to the usual common kinds, that the Fancy Dahlias do to the Show flowers. Their catalogues contain lists of eight or ten varieties; two of them have been in bloom all the spring in our collection, and their bizarre flowers have been greatly admired by all who have seen them. The names of these two are Inimitable and Pantaloon; the former a magnificent *striped* flower, yellow and maroon; and the latter shaded with several colors, yellow, lilac, maroon, &c. They are more delicate in their growth than the ordinary kinds, but they will become great favorites.

Achimenes chirita.—This exquisite new species, which we briefly described in our February No. (p. 69,) will be in full bloom in our collection, this month. The Belgian cultivators say that it surpasses all that have heretofore been seen; the flowers are as large as a Gloxinia.

Begonia zanthina.—This new, yellow flowered species, noticed in our last volume, (XIX, p. 139,) has been exhibited before the Pennsylvania Horticultural Society, by Mr. Buist of Philadelphia.

NEW POMPONE CHRYSANTHEMUMS.—The following are the names of some of the newest and best Pompone varieties introduced last year: Fiorella, Jonas, Madame de Contades, Madame Adele Renard, Madame de St. Uldegonde, Madame de Vatry, Stella, Mademoiselle Helene d'Elkinger, Reine des Anemones, and Nonsuch. Some of these are remarkable for their form and peculiar colors.

247. THE GIANT TAXODIUM OF CALIFORNIA.

Syn. Wellingtonia gigántea *Lind.*

A hardy evergreen tree; growing 200 to 300 feet high; increased by seeds; grown in any good, light soil. Bot. Mag., 1854, pl. 4777.

The Giant Taxodium or Red wood of California has already become tolerably well known to every one who has heard anything of its native country. In truth, it is the most astonishing product of that new region of the United States, a few years since a wilderness, but now peopled with a hundred thousand inhabitants, and with a commerce in importance scarcely second to any of the older States of the Union. The riches of its auriferous sands have spread to the remotest parts of the earth, and almost every nation is represented among its inhabitants. Scarcely less widely known is the magnitude and history of the giant tree now under notice. Defying the heat and cold, the storms and blasts of THREE THOUSAND years, and attaining the almost incredible size of *ninety feet in circumference*, one of the finest specimens was ruthlessly felled to the ground, for the paltry object of public exhibition, and, stripped of its bark in such shape that it might be put together, is now, we believe, on its way to the Atlantic States, to be set up for a show. For our part, we would give double the price which may be demanded to see the tree, to have one look at the *man* who could have the heart to put an axe into its noble trunk. No; the government of California should have preserved such a specimen at any cost, even at the expense of a golden fence around it, if no iron was to be had, that it might stand till its own decay should bring it to the ground, a living monument of the rich vegetation of that country.

We have already noticed this fine evergreen tree, (p. 185,) and have commented upon the pompous name given it by Dr. Lindley, as has also our correspondent W. R. Prince. We are now glad to learn that our California neighbors have the same opinion as we expressed ourselves, and justly ridicule the pretensions of Lindley to give it the new name of Wellingtonia. The *California Farmer* of May 4, just received, has an excellent article on the subject, which we copy, fully exposing, as it does, the ambitious and overreaching notions of Dr. Lindley, in appending the names of European heroes to our finest American trees. As the writer truly says, "a more preposterous piece of cockneyfied nonsense never filtered through the brain down into the fingers through the ink of the pen of any denizen of the commercial Babylon of the modern world."

To the Editors of the California Farmer:

In the *Illustrated London News* of Feb. 11 last—a copy of which is enclosed—you will find an excellent botanical description, accompanied with an engraving, of the celebrated Arbor Vitæ of San Antonio Creek, in the county of Calaveras.

The gentleman who gives the scientific biography of this wonder of living vegetation, was well known to me during his residence in this country, and it is no flattery to say that a more competent person could not be found to delineate its physical features. Besides extensive journeys through nearly every portion of Oregon and California, Mr. Lobb is preëminently fitted to form a correct judgment, from a thorough acquaintance with the order of cone-bearing trees—having traversed the Cordillera of South America, from the equator to near the Straits of Magellan—these countries, with Northwest America, affording the most magnificent specimens and varieties of this class of plants. Mr. Lobb is not only an experienced and diligent collector, but his taste has constantly led him to take the greatest interest in the Conifera, and his accuracy and care, I can say from personal knowledge, it is almost impossible to exceed.

The description by this gentleman, of our celebrated tree, was made to the *London Gardeners' Chronicle*, prior to the 11th February—Mr. Lobb having sent living specimens of the youthful brothers of the Calaveras giant, with a quantity of the seeds, to London, for the examination of the scientific, and for the purpose of propagating the species in England. The man of the *Chronicle* thereon dilates and exfoliates to that degree, that to any other but a lover of trees and flowers and running brooks, it would be thought expedient to confine him within the square of a soda water bottle crate; but finally you conclude it would be wiser to sew him up in a straight jacket, for, after a most inviting and delightful description of the tree, he worries his brains into a vortex of names and quandaries, and finally falls from his excursive flights and heights into the domains of Nature's history, to proposing as a name for our noble Arbor Vitæ,—or, if you please, in Spanish Arboldzo grandissima—what do you think?—what name could you possibly exercise your jealous California guessing at, by which you would arrive at a satisfactory solution of the enigma? Give it up, for I am impatient to let you know. He suggests and accords the name of of a soldier—a mere piece of flesh—of a son of Mars—lately clothed in a Field Marshal's dress in the army of Britain, and called Arthur Wellesley, whilom Duke of Wellington, commander of her military forces till he grew grey with service, and then quietly laid down his life at the finality of his corporeal existence, amidst the benedictions of his countrymen, for sticking to them and by them through thick and thin. He says it ought to be called the "Wellingtonia Gigantea," and then goes on to call it so, and actually describes it as such; thus making the first assumption of a name, which, with most European and English readers, will cleave to it, unless we enter our vigilant and vigorous protest. And, in the name of California, I shall assume to do so, for a more preposterous piece of cockneyfied nonsense never filtered through the brain down into the fingers through the ink of the pen of any denizen of the commercial Babylon of the modern world.

Without detracting one iota from the claims and character of the great Duke of Wellington, who was all his life a very monument of plain, sagacious, practical good sense—let us ask what right his admiring countrymen in the botanical or military line have for flying off to California to fasten his fame and glory to the most wonderful specimen of the living, spreading presence of the great Creative Author of all things, who planted this vegetable pyramid as a memento of his handiwork, when the Sierra Nevada was lifted from the volcanic centres of our planet, and emerged, with its snow-crested peaks, from a primeval ocean, which laved its bases! And the benificent Father of bountiful creation, 3000 or 5000 years ago planted with His own paternal hand in a silent valley of our California, on the side of the eternal hills, this sign of his love to that portion of the family of his children who should reside for all mundane time in this partition of the earth's extremities, after passing through centuries of wadings in human blood, and petrified in their souls in the servilities of religious faiths and fanatical bigotries—yes, after 6000 or 60,000 years of experience, to arrive at the shores of the Ocean of Tranquillity, and they and their children sit them down with pleasant and grateful thoughts under its wavy foliage and spreading branches—realizing the typical comparison of the all-embracing wings of nature's Universal Parent. Or, if left as a monument to men, to testify of the truth of the Chronicles of the Democratic Theocracy of the Jews, who, like true cosmopolites, have scattered from the cradles of humanity in the Asiatic Palestine, at that point of their history when Joshua, their first leader after Moses, wearied with the slaughter of the Amorites—"And Joshua said, in the sight of all the hosts of Israel, 'Sun, stand thou still upon Gibeon, and thou, Moon, in the valley of Ajalon.' And the sun stood still and the moon stayed, and hasted not to go down about a whole day." And at this great concurrence of human passions, when the mechanism of the universe of the Living God was arrested for a space of time, as asserted in the most ancient collection of historical and literary documents, we may imagine our Californian Arborial Methusaleh was planted to mark a momentous epoch in the cycles of worldly events.

Now, I say, hath not Wellington's name been stuck by Englishmen to boots, shoes, dogs, cats, carts, horses, carriages—to streets, towns, cities, rivers, ships, counties—to puling infants, regiments of red-coated soldiers, inns of rest for man and beast—to every conceivable thing under the sun, so as to weary and disgust the mind of independent man, born of the forest and prairies, with the very sound of his title? Then, why seek to fasten it on the magnificent specimen of nature's handiwork, placed in a far-off valley in the bosom of the snowy mountains of the Northern Pacific, where its roots were laved with the waters from the primeval snows of our Cordillera; for 6000 years depositing their flakes of gold at its roots, to attract men from every clime to come and rest under its beneficent pyramidal pile of leafy and bounteous refreshing green foliage of shade.

The heart of every Californian ought to rise up indignant at this assumption of a stranger, and in a still greater degree at the American savage who dared, with his barbarous axe, in open day, to slay this mighty giant of our mountains, built by the hands of God in the virginal youth of California, when the foundations of the eternal hills were laid by His majesty and omnipotence.

If Californians or botanists wish to bestow the name of a human being on this majestic plant, there are sufficient names in the history of our State and country far more applicable and proper than those of fagged out old Europe.

But the tree, I conceive, ought not to bear the name of a human being. It is God's tree—His gift to the children of California, to repose under its cooling shade in the heat of the noonday sun, and rest their wearied bodies from exhausting labor. Therefore Californians ought to baptize this primary wonder of botanical science, and not Atlantic or European strangers.—ALEX. S. TAYLOR, *of Monterey.*

Having thus shown that we are not alone in our opinion of the impropriety as well as injustice of Dr. Lindley's name, we now give Mr. Lobb's own account of his discovery of the tree :—

"This magnificent tree, from its extraordinary height and large dimensions, may be termed the monarch of the Californian forest. It inhabits a solitary district on the elevated slopes of the Sierra Nevada, near the head waters of the Stanislaus and San Antonio rivers, in lat. 38° N., longitude 129° 10′ W., at an elevation of 5000 feet from the level of the sea. From eighty to ninety trees exist, all within the circuit of a mile, and these varying from 250 feet to 320 feet in height, and from ten to twenty feet in the diameter of the trunk. Their manner of growth is much like that of Sequoia (Taxodium) sempèrvirens; some are solitary, some are in pairs, while some, and not unfrequently, stand three or four together. A tree recently felled, measured about 300 feet in length, with a diameter, including bark, 29 feet, 2 inches, at five feet from the ground; at eighteen feet from the ground it was 14 feet, 6 inches through; at 100 feet from the ground it was 14 feet; and at 200 feet from the ground, five feet, 5 inches (!) The bark is of a pale cinnamon brown, and from twelve to fifteen inches in thickness. The branchlets are round, somewhat pendent, and resembling a cypress or juniper. The leaves are pale grass green; those of the young trees are spreading, with a sharp accuminate point; the cones are about two and a half inches long, and two inches across the thickest part. The trunk of the tree in question was perfectly solid from the sapwood to the centre, and, judging by the number of concentric rings, its age has been estimated at 3000 years. The wood is light, soft, and of a reddish color, like redwood, (or Taxòdium sempervirens.)"

Mr. Lobb sent home specimens of the branches bearing foliage and cones, and seeds, to Messrs. Veitch & Co., who have raised a young stock of plants.

From these branches and mature cones the description of the tree is made up, and a new genus established, without seeing the male flowers. The whole of the Coniferæ are one confusion of names, Cedrus Deodara being referred to no less than 3 *genera*, and many of the so called species are nothing but varieties. It remains yet to be seen, whether this Giant tree is anything more than a variety of Sequoia sempervìrens; when this is settled, a new and appropriate name should be given to it.

248. To'rreya myri'stica. *Hooker*. California Nutmeg. (Coniferæ.) California.

A hardy evergreen tree; growing forty feet high; increased by seeds; grown in any good, light soil. Bot. Mag., 1854, pl. 4780.

Another "beautiful Evergreen tree, thirty or forty feet high, native of elevated regions in the Sierra Nevada of California, where it was discovered by Mr. Wm. Lobb, in 1851, who sent specimens and seeds home to Messrs. Veitch & Son, of the Exotic house, Exeter, and King's road, Chelsea. The slightest glance at the internal structure of the fruit, at once identifies this tree with the genus Tórrey*a* of the southern United States, but only in the Aspalaga, and Apalachicola County of Middle Florida. There has been discovered the Tórrey*a* taxifòlia of Dr. Arnott; those who are familiar with that species now not very rare in our gardens and pleasure grounds, or who will resort to the figures in Hooker's *Ic. Plant*, (pl. 232 and 233,) will hear with surprise that I had no little difficulty in framing specific characters that shall clearly distinguish the two. On first aspect there is as much difference between them as there is between the Cephalotàxus Fortùn*i* and the common yew, (setting the fruit aside.) The cephalotaxus represents our California nutmeg, with its large foliage, and the common yew the Tórrey*a* taxifòlia; in fact, the foliage and fruit of the Tórrey*a* myrística are more than twice the size of T. taxifòlia, and thus the common observer will never be at a loss to distinguish them."

All who know the Tórreya taxifòlia, yet rare in American gardens, will know how to appreciate the beauty of the T. myrística, which is twice as large, and coming from the high elevations of the Sierra Nevada, will probably be much hardier, as north of New York the former is liable to be injured in severe winters, its native locality being the warmer parts of Florida. So fearful have we been of the loss of our young stock, that we have grown it in pots, so as to be protected in winter. T. myrística will therefore be a grand acquisition. Messrs. Veitch & Co. have raised a stock of young plants, which are now ready for sale, at the high price, we presume, of 2 or 3 guineas each. The discovery of such fine trees as *A*'bies bracteàta, the Giant Taxodium, and the Tórrey*a*, show the importance of sending an American collector to introduce them into our gardens.

HARDY EVERGREENS ON THE NORTH RIVER, AT FISHKILL.—Mr. H. W. Sargent, in the *Horticulturist*, gives a list of the evergreen trees in his collection, and their appearance after the last severe winter. From this we have collected the following information :—

Trees that have proved quite hardy.—*A*'bies Douglás*i*, *A.* menziès*ii*, and *A. picea.*

Picea cephalónica, *pinsàpo*, *Pindrow*, nóbilis, pectinàta dula, Clanbras*iàna*, *Pitchta*, Normand*i*, and Frazèr*i*.

*P*ìnus *Pináster*, Cèmbra, pùmilis, Lambert*iàna*, Gerard*iàna*, marítima, excélsa, ponderòsa, Coultèr*i*, Devon*iàna*, macrocárpa, Sabin*iàna*.

*J*uníperus tamarascifòlia, alpìna, hibérnica, commùnis péndula, recúrva, Bedford*iàna*, excélsa, and fastigiàta.

Tórrey*a* taxifòlia.

*C*upréssus pendula, and horizontàlis.

*C*èdrus Libàni.

Cryptomèria japónica.

Sabìn*a* communis, and variegàta.

Taxòdium horizontàlis.

Taxus baccàta, elegantíssima, péndula, and aúrea.

Thùja filifórmis, chinénsis, plicàta, and tartárica.

Cunninghám*ia* sinénsis.

Trees that were more or less injured.—A'bies Smith*iàna ;* *P*icea Webb*iàna* and Brunon*iàna ;* *C*upréssus funèbris ; *C*èdrus *Deodàra ;* Araucària imbricàta ; Taxus adpréssa.

Trees that were killed.—Podocarpus laterális ; Libocèdrus chilénsis ; Euonymus fimbriàta.

It should be recollected that the winter at Fishkill is less severe than around Boston; and probably many of the above would be found too tender for our climate. Some of them we have found to be entirely hardy; but we have not yet dared to try all the kinds we have in our collection in the open air; we shall do so, however, as soon as we can raise a good stock of plants.

Mr. Sargent's list is a desirable contribution to our stock of information on this important subject, and we shall be glad to have some of our amateurs around Boston give us a similar list of the trees in their possession.

MISCELLANEOUS INTELLIGENCE.

ART. I. *Societies.*

NEW YORK STATE AGRICULTURAL.

This old association, in connection with the American Institute and New York Horticultural Society, will hold their annual exhibition in Hamilton Square, New York City, on Tuesday, Wednesday, Thursday and Friday, October 3d to the 6th next.

The list of premiums is large and liberal, but is *only open to the cultivators of New York State.* This, every one interested in horticulture will regret, as it will prevent them from having the assistance of Eastern cultivators, who no doubt could send objects of great interest to the exhibition. We are somewhat surprised that the New York Horticultural Society and the American Institute should have agreed to this, as their premiums are open to the whole country. The entire list for horticultural and floral objects would occupy a page or two, and we have no space to copy it. The highest premiums—silver cups, of the value of $15 each—are for the "greatest number of good varieties and best specimens of pears, three of each;" and for the greatest number and best specimens of apples.

AMERICAN INSTITUTE.

The annual election for officers of the American Institute was held on Thursday, May 18th, when the following officers were elected for the ensuing year:—

President—Robert L. Pell.

Vice Presidents—Robert Lovett, D. Meredith Reese, Livingston Livingston.

Recording Secretary—Henry Meigs.

Corresponding Secretary and Agent—Peter B. Mead.

Treasurer—Edward T. Backhouse.

The other committees on the same ticket were also elected.

PENNSYLVANIA HORTICULTURAL.

The stated meeting of this association was held Tuesday, June 20th, in the Chinese Saloon—the President in the chair. The display on this occasion, in some respects, surpassed even that of the last month, notwithstanding it was considered one of the best. The extensive tables of the society were covered with plants of interest and beauty. The prevailing plant in the collection was the fuchsia in its great variety—some of the specimens towering up into trees in graceful and picturesque symmetry, which met with universal admiration. Gloxinias of all hues and tints were interspersed throughout, and in some instances formed collections of themselves. In others the variety of choice plants was unusually rich. On one table were several specimens of air plants of interest and rarity. The Cattleya Mossiæ and Saccalobium guttatum were really handsome. The Kalosanthes Phœnix and Mediniila magnifica were not the less objects of attraction.

The fruit exceeded anticipation. The beautiful peaches, fragrant nectarines, and ripe grapes, to the visitors appeared delicious; a fine variety of cherries, large gooseberries, several kinds of strawberries, white and red currants and black mulberries were displayed. Also specimens of finely grown culinary vegetables, and dishes of forced potatoes were to be seen.

Premiums were awarded, viz.: By the Committee on Plants and Flowers—gloxinias, ten plants, for the best, to Thos. Robinson, gardener to B. A. Fahnestock; for the second best, to Alex. Barnett, gardener to H. Pratt McKean. Fuchsias, eight plants, for the best, to Thos. Robinson; for the second best, to Alex. Burnett; for the third best, to John Pollock, gardener to James Dundas. Collection of plants—for the best, to Robert Buist; for the second best, to Thomas Robertson; for the third best, to John Pollock. Specimen plant—for the best, to R. Buist; for the second best, to John Pollock. New plants, shown for the first time—a premium of $3 to Robert Buist, for orchids and a fine plant of Kalosanthes Phœnix; and one of $2 to James Kent, for green and hot-house plants. Baskets of cut flowers—for the best, to Jerome Graff, gardener to Caleb Cope; for the second best, to Robert Kilvington. Of indigenous flowers—for the best, to Meehan & Saunders. Bouquets, one pair—for the best, to Jerome Graff; and for the second best, to James Kent. Special premiums of $2 for orchids, and of $3 for a general display of plants to John Pollock, James Dundas' gardener; of $2 to James Kent, for a general display of plants; of $2 to H. A. Dreer, for a splendid collection of seedling verbenas and Chinese pinks. The committee called particular attention to a very fine seedling petunia, one of the best we have seen, and a good seedling pelargonium, grown by John Gray.

By the Committee on Fruits:—Grapes—black variety, bunches, (Black Hamburgh,) to John Pollock, gardener for J. Dundas; for the second best, (same variety,) to Jerome Graff, gardener to C. Cope; white variety, (Muscat Alexandria,) to the same; for the second best, to John Pollock. Strawberries—for the best, to James M. Page, Burlington; for the second best, to A. L. Felton. Currants—for the best red, to A. L. Felton; for the best white, to Isaac B. Baxter. Cherries—for the best, to Isaac B. Baxter

Special premiums—of one dollar to A. L. Felton, for a dish of black mulberries. Also, for a fine display of peaches and nectarines, of two dollars each, to Jerome Graff.

The committee examined in the ad interim the Pennsylvania Strawberry, from Gerhard Schmitz—specimens unusually fine, some measuring five inches in circumference and weighing 160 grains troy.

By the Committee on Vegetables:—For the best display by a market gardener, to A. L. Felton. And a special premium of one dollar, for a dish of fine mushrooms, to Alexander Burnett.

The fruit committee, to whom was recommitted a portion of their ad interim report, on motion made at the last stated meeting, in February last, report that the plant in question, on which the facts and opinions were therein embraced and founded, being destroyed, no examination of the identical plant was practicable. They, therefore, report back to the society, without alteration, that portion of it relating to the strawberry question that had been recommitted to them for reconsideration.

The treasurer submitted his semi-annual statement.

Eight gentlemen were elected members of the society.

Art. II. *Massachusetts Horticultural Society.*

Saturday, April 15th, 1854.—An adjourned meeting of the Society was held to-day—the President in the chair.

Dr. Wight read a letter from Mr. Glover, in relation to models of fruit. Also a letter from Samuel Appleton, received with a package of seeds; voted to distribute the seeds, and thanks to the donor. Also a letter from the New York Horticultural Society, in relation to sending a collector to Oregon and California for seeds of trees, &c.

Mr. R. M. Copeland (of Roxbury) presented his report on scraping trees, which, with a proviso stating that the views of the committee were to be received as such, and not as the opinion of the society, it was voted to publish for distribution among the members.

W. R. Austin, the treasurer, reported an account of sales of the *Transactions of the Society*, by Messrs. Ticknor & Co.; accepted.

J. H. Kenny, Wareham, was elected a member.

Adjourned three weeks, to May 6th.

May 6th.—An adjourned meeting was held to-day—the President in the chair.

The President, from the executive committee, reported that it was inexpedient to coöperate with the New York Horticultural Society in sending a collector to California.

Dr. Wight read a letter from M. Pfeifer, in relation to the curculio, which was laid on the table.

Dr. Wight presented a copy of the *Farmer's Companion*, published at Detroit, Mich., stating that it would be sent to the Society. Thanks voted for the same.

Adjourned three weeks, to May 27th.

HORTICULTURAL OPERATIONS

FOR JULY.

FRUIT DEPARTMENT.

The month of June was warm and genial, with frequent and abundant showers, and everything appears in the most healthy and flourishing condition. Fruits of some kinds, particularly pears, have not set so well as was anticipated, and the crop is scarcely a medium one; but what there is, looks unusually fair and handsome.

GRAPE VINES in the earliest forced houses are still at rest, and require no particular care for the present. Vines in the greenhouse will now begin to color, and should have good attention. If any berries rot or appear defective, cut them out; and if not thinned so as to give them room to swell, cut away more of the small ones. Keep the laterals topped; attend to the moisture of the house, and damp the walks freely until the berries have all changed color, when it should be gradually discontinued. Vines in cold houses should now be thinned, their bunches shouldered, and the laterals topped. Damp the house freely in warm weather, but be cautious in doing so in cold damp weather. Vines in the open air should now have all the shoots not intended for next year's wood, topped three or four eyes beyond the fruit. Apply guano occasionally in small quanties if the ground is poor.

PEACH TREES in pots will now be ripening their fruit; water carefully. Young trees potted this year will be growing vigorously, and should have a good supply of moisture.

STRAWBERRY BEDS should be looked after as soon as the fruit is all picked. Dig between the rows, so as to make room for fresh runners.

PEAR TREES should be summer pruned now, as we have directed in previous volumes. Grafts should be neatly tied to stakes, to prevent their being broken by the wind.

INSECTS should yet be looked after. The fall caterpillars will now infest apple and pear trees, and should be destroyed before they have injured the foliage. Lice may be easily destroyed with whale oil soap.

FLOWER DEPARTMENT.

July will be a busy month where there is a good collection of plants. Everything will now require looking after; most of the stock will need to be potted or top-dressed. When this is completed, the whole should be neatly arranged, so that they can be freely syringed in order to keep down insects.

CAMELLIAS should be repotted this month. Syringe freely every other day, and water sufficiently at the roots to keep the soil well moistened. Grafting may be done the last of the month, and cuttings may be put in now.

Azaleas may now be removed to the open air, and such as need it repotted. Choose a half shady place.

Fuchsias will require a shift into larger pots.

Gloxinias and Achimines in small pots should be put into a larger size.

Chrysanthemums should be repotted, and have the tops nipped off so as to make bushy plants.

Chinese Primroses should be repotted now, and the double kinds propagated by cuttings.

Pelargoniums should be cut down this month; keep them rather dry after the operation till they begin to grow.

Heliotropes, for winter blooming, should now be cut down and repotted.

Callas—discontinue watering now.

Verbenas, for winter blooming, should now be repotted and plunged in tan or ashes.

Oxalis hirta should be repotted the last of the month.

Næapolitan Violets should be divided and planted out in beds for a stock for winter blooming.

Mignonette and Sweet Alysum seeds should be planted now.

Monthly Pinks should be propagated for next winter's stock.

Euphorbias should be repotted now.

Specimen Plants of all kinds for autumn or winter blooming should have careful attention.

FLOWER GARDEN AND SHRUBBERY.

The grounds should now be kept in the most complete order. Clean and roll the walks; clip box edgings; mow the lawn, and preserve neatness and cleanliness in each department. Beds containing early bulbs may now be filled with annuals or bedding plants. Herbaceous plants, pæonias, &c., which have completed their bloom, should have their tops cut off gradually till they are wholly removed. Roses pruned of their old wood now, will make fine strong shoots for next year's bloom.—They may be layered now for a young stock.

Tulips, Hyacinths, and other spring bulbs, should be taken up immediately if not already done.

Carnations and Picotees should be layered as soon as they have done blooming. Seedlings raised last month should be planted out in beds in the open ground.

Pinks should be propagated by pipings.

Japan Lilies, in the open ground, should be staked, to prevent their being broken by the wind.

Pansy Seeds may be sown this month for a fine late fall bloom.

Perennial and Biennial flower seeds should be sown now, in small beds, and afterwards transplanted to where they are to bloom.

Dahlias should be staked, pruned and mulched, to protect against dry weather.

THE MAGAZINE

OF

HORTICULTURE.

AUGUST, 1854.

ORIGINAL COMMUNICATIONS.

Art. I. *How to Lay Out a Good Garden.*

In our last number we gave a few brief directions on the best mode of making a good garden; our remarks were commenced with the expectation of completing them in one article, but as we found we could not do full justice to the subject in so limited a space, we made them merely preliminary to a more full and detailed account of the proper course to be pursued in laying out and planting small gardens, such as are usually attached to town or suburban dwellings, and ranging in extent from fifty to one hundred feet wide, and from fifty to three hundred feet long. Villa residences, containing an acre or more of land, are not included in our remarks; their extent of ground admitting the introduction of the gardenesque and picturesque style, or a mixture of different styles, just as the means of the proprietor will allow, or the taste of the landscape gardener may suggest.

Town, cottage or small suburban gardens, however, admit of little or no choice as regards style; they must be laid out principally in the geometric or regular order, for any attempt to introduce a gardenesque or picturesque arrangement, in so limited a space, will only result in an unnecessary waste of the ground, or a ridiculous attempt at landscape art. Many small gardens have been entirely ruined by the desire of the proprietors to have something in the rustic or natural style, without at once taking into consideration the extent of their grounds. It is no uncommon thing to see a garden of a quarter of an acre cut up into serpentine walks, in such a manner as to leave scarcely a spot of earth of sufficient size to plant a tree, or grow a dozen cabbage plants. There are some individuals who admire such a display, and regard it as a specimen of elaborate skill, but the man of true taste must look upon all such efforts as childish, and beneath the recognition of landscape art.

The general form in which town gardens are usually laid out is a parallelogram, ranging in width from fifty to one hundred feet, and in depth from fifty to two hundred feet. These lots are often uniform in size, and frequently form a continuous row for many hundred feet, or perhaps a mile in length. On the fronts of these lots the houses are erected, from five to thirty feet from the street, but oftener the first distance than the latter; an error upon which we must not omit to make a passing remark. Nothing, it appears to us, can be more objectionable than a dwelling immediately upon the street, and for various reasons it should always be avoided: 1st, the dust from the road; 2d, the absence of all privacy to the inmates; and 3d, the prevention of the planting of trees and shrubs between the house and the road. In a lot of one hundred or more feet in depth, no house should stand within fifteen or twenty feet of the street, and if thirty feet the better.

But whether a plot of ground selected for a garden be a parallelogram, square, or any irregular shape, whether the sizes we have above mentioned or not, it cannot well be laid out in any other than the regular style, or a very slight departure from it. This question settled, other considerations arise as to shelter, shade, &c., for the planting of small gardens is materially affected by their position. Gardens in the rear of houses on a street running east and west, are much more shaded than those situated on a street running in any other direction; and of course are not so well adapted to the growth of some trees and plants, as those which have the full rays of the sun the greater part of the year; greenhouses or graperies when attached to such gardens must be at the extreme part of it, while in others they may be annexed to the house or immediately adjoin it. All these things are to be considered in laying out a complete suburban garden.

A portion of these remarks should perhaps have preceded our advice in our last number; but as they have suggested themselves as we have proceeded, we have thought it better to give them here, as they may be found of some importance to all who are about to build.

The ground decided upon, we shall suppose the house, if not already built, to stand thirty feet from the street, or about that distance; this will allow a good space for planting what we shall term the front garden. The back garden, supposing the house to cover thirty feet more, will be ninety feet long, allowing the lot to be one hundred and fifty feet deep. The whole of the ground, both front and back, should then be thoroughly trenched, according to our previous directions.

It is a very prevalent custom, if not a general one, even where trenching is performed, to confine this operation only to the ground to be planted, throwing the soil out of the walks, to make the borders deeper, and filling up the space with rubbish, gravel, &c.; but a little reflection will show that this practice is very objectionable, especially if fruit trees are to be planted on the borders, for the earth under the walks is just so much available room for the roots to extend and find nourishment, being equivalent in fact to so much additional garden-room. All that is necessary is to throw out the soil on the surface of the walks, to the depth of six inches, and fill the space with gravel; remembering, however, that all drains, if any are needed, should be made under the walks, which, if the location is retentive of moisture, will make them dry, firm, and comfortable at all seasons,—an important consideration, especially in spring and autumn, when a damp or muddy walk almost deters one from entering the garden, or at least destroys much of the enjoyment derived from a promenade through the grounds.

The front garden, of such a size as we have supposed, (thirty feet deep and of greater or less width,) should be laid out with a straight walk from the gate to the front door, or a circular one if the space is broad enough, and there are two entrance gates, one on each side. Nothing can be more objectionable than a curved walk on a level piece of ground, without any obvious reason to indicate the cause of such a curve. If a short bend is made in a walk, unless in the right direction, the object to be attained is defeated; for there will be perpetual attempts to take the nearest route to the main entrance to the house, and the grass or border, whichever it may be, will be crossed and recrossed at all times. When the gate is directly in front of the house, the walk should be straight; when on one or both sides, unless the entrance door is on the side, it should be curved; for if made straight for some distance and then turned at a right angle, a foot path will be likely to be formed across the grass. Hence the necessity of varying the line of walk according to the situation, construction of the house, &c.; but as a general rule, easy curves in the shortest direction, or straight lines, should be the guiding principle in making walks to small gardens.

Another important consideration is, not to make too many walks. It is a common practice, even in the smallest front gardens, to have a walk within two or three feet of the boundary fence. This is not only unnecessary, but it destroys the only chance there is of forming a plantation of trees and shrubs where they are most needed and look best, next the street. One walk only is necessary, unless the distance from the street to the house is more than fifty feet.

The width of walks varies from four to six feet, according to the size and character of the house and extent of ground, the average being about five feet. If a semi-circular walk, for the passage of carriages or vehicles of any description to the front door, it should be ten feet wide at least, and unless very limited for space, twelve feet. All these considerations being borne in mind, the walks can be staked out, gravelled and completed, and the ground made ready for planting.

The garden in the rear of the house should be laid out on the same principle we have advised above. If a square or parallelogram, run a neat walk parallel with the boundary fence, and four or six feet from it. This will leave a good space for fruit trees, as dwarfs or espaliers, or for grape vines or other climbing plants, trained to trellises against the fence, with gooseberries, raspberries, currants, &c., in front. On the other side should be a six foot border, if it is desirable to have a fruit garden, or choice shrubs and small growing trees if only an ornamental one. The interior compartment being devoted to beds of flowers and flowering plants, to strawberries, &c., or to rhubarb, asparagus, or other vegetables, or to all combined, just as the taste or inclination of the proprietor may desire; for on a piece of ground of the largest size we have named, (100 by 200 feet,) a great quantity of fruit and vegetables can be raised, after allowing a reasonable space for shrubs and flowers. But this cannot be done without considerable labor, and some expense. When a garden is to be laid out so as to be kept neat, without much expense, it should be mostly grass, and shrubs or trees. For a year or two, till the trees get well established, the ground should be cultivated; afterwards, it may be sown down to grass, when it will only need mowing occasionally to present a beautiful appearance at all times. There are many persons who have not the time to devote to the management of a garden requiring much attention, and who do not wish to be at the expense of keeping a gardener, or hiring labor; to all such there is nothing which will afford more gratification than a choice selection of trees and shrubs, both deciduous and evergreen, judiciously arranged so as to give variety at all seasons, and planted on a smooth and velvety turf. The less cross walks for gardens of this kind the better. Avoid this error. Let such walks as are necessary be broad, smooth and level; this will give character and expression to the garden, while a lot of narrow paths only fritters away all unity of appearance.

Some further observations in regard to planting, and a list of some of the most desirable ornamental trees, shrubs, evergreens, flowering plants, fruit trees, vines, &c., suitable for gardens of this description, we defer to another number.

ART. II. *The Singing Birds and their Songs.*

By WILSON FLAGG.

THE singing birds are universally regarded as the most interesting part of animated creation; and they are the only creatures, excepting a few of the insect tribe, that can be said to sing. Their voices are associated in our minds with all the beautiful scenes of nature and with the fairest seasons of the year. There is no man, however insensible he may be to the sound of musical instruments, who is not delighted with the warbling of birds, who speak the language of nature and of love. The birds of temperate climates are believed to be better singers than those species that inhabit the tropics. This opinion, generally correct, has probably arisen partly from the fact that a large proportion of the birds that winter in the tropics, belong to the temperate latitudes, and that they are silent during this period, because it is not their breeding season. They sing only in summer, when they return to their native climes to rear their young. The tropics are always full of these sojourners, because there is winter at all times, either north or south of them.

Singing birds are found in the greatest numbers on cultivated, or half-cultivated lands, or in woods in the vicinity of them. It may, therefore, be inferred, that as the country grows older, and is more extensively cultivated, the numbers of our warblers will increase; and it is not improbable that their vocal powers may be improved. Hence it may be true, that for many years, after the first settlement of this country, there were but few singing birds of those species which at the present time are so numerous, having multiplied with the increase of human population and the culture of the wilderness. At that early period, though the same species existed here, and were musical, their numbers might have been so small that one could be seldom heard. By this circumstance travellers were led to believe that there were but few singing birds in America.

A little observation would soon convince one that the wilderness affords comparatively but few warblers. There you find crows, woodpeckers, jays, and other noisy birds, in great numbers; and you occasionally hear the notes of the solitary thrushes and fly-catchers; but not until you are in the vicinity of orchards and plantations, are your ears saluted with a full band of feathered musicians. The common bobolinks are seldom found in the deep forests, and are unfrequent in the wild pastures and meadows. Their chief places of resort are the cultivated grass lands. They build their nests on the ground in the midst of the tall grass, and these nests are exposed, in great numbers, by the scythe of the haymaker. These birds, before America was settled by the Europeans, and when the greater part of the country was a wilderness of woods, must have been comparatively few. There are probably thousands at the present day to as many hundreds that existed in the time of Columbus. The common robins, the song-sparrows, the grass-finches, and indeed all our familiar birds, have probably increased in the same ratio, with the progress of agriculture and the settlement of the country.

The song of birds is undoubtedly innate; or rather, birds of the same species have, by their organization, a predisposition to utter certain sounds, when under the influence of certain emotions. Besides their native notes, they will learn those of other birds, when confined with them, which they sometimes blend with their native strains. The bobolink when caged, readily learns the song of the canary, and surpasses the original; but in his wild state he never deviates from his own peculiar medley. There is reason to believe that nature has provided each species of bird with notes, unlike those of other species, as a means by which individuals should be enabled to identify their own kinds. When confined in a cage all birds may become imitative, and in a measure forgetful of their original strains.

The song of the bird seems to be the means used by the male, not only to woo the female, but to call her to himself when absent. Before he has chosen his mate, he sings more loudly than at any subsequent period. The different males of the same species seem at that time to be vieing with one-another; and probably the one that has the loudest and most varied song is most likely to be soon attended by a mate. While the two birds are employed in building their nest, the male constantly attends his partner from place to place, and sings less loudly and less frequently than before. This comparative silence continues until the female begins to sit on her eggs. While she is sitting, the male again sings more loudly and incessantly, perched upon some neighboring bough, as if to apprize her of his presence, or perhaps with some inclination to entice her away from the nest. It is a curious fact that male birds seem to be somewhat displeased with the female while she is sitting, and are more than usually vociferous.

After the young brood is hatched, the attention of the male bird is occupied with the care of his offspring, though he is far less assiduous in his parental duties than the female; and, for a season he becomes somewhat silent, until a second incubation commences. But those species that rear only one brood in a season, become entirely silent after the young birds are fledged and have left the nest. Should they rear another brood, the male becomes once more as vocal as ever while his mate is sitting the second time. He does the same, if he happens to lose his mate, when he becomes again very tuneful and vociferous, uttering his call notes loudly for several days, and finally changing them into song. Hence it would seem that the song of the bird proceeds from a certain degree of discontent, arising first, from his want of a mate, and secondly, from his uneasiness on account of her absence while sitting upon her eggs. The buoyancy of spirits produced by the delightfulness of the season, and the full supply of his physical wants, is joined with the pains of absence which he is striving to allay. I have often thought that the almost uninterrupted song of caged birds proves their singing to be no certain evidence of happiness, and that it chiefly arises from a desire to entice a companion into their own little prison. It is well known that when an old bird from our own fields is caught and caged, he will continue his tunefulness long after all others of the same species, who enjoy their freedom, have become silent. The bobolink, in a state of freedom, seldom sings after the middle of July; but if one be caught and caged, he will continue to warble more loudly than he did in his native fields, until September.

The notes of birds in general, seem to be arranged without regard to the intervals of the musical gamut. You cannot perceive anything like artificial pauses or gradations in their time or melody. This proceeds from no deficiency of musical ear, as every singing bird, while young, may be taught to warble an artificial tune. They seldom dwell steadily on one note, but are constantly sliding and quavering, full of slurs and *appoggiaturas*. There are some species whose notes approximate to the artificial modulation; but it is worthy of notice that these are not classed among singing birds. The whistling quail utters three notes in his call—the two first alike, except in time, and the third a slide from these to a perfect fifth. The notes of the whippoorwill resemble those of the quail, his first note being a minor-third above the second, and the third note a fourth above the first, and the third note being more perfectly intonated than that of the quail. The common chickadee, or black-cap titmose, frequently in summer utters two notes which make a perfect minor-third on the descending scale. It is not improbable that if the notes of the singing birds could be accurately written down on the gamut, they might be found to possess a regularity of modulation, corresponding to that which we call the artificial one.

The lark and the nightingale which have been made so familiar to us by our acquaintance with English literature, are not inhabitants of America, and their absence is lamented by every lover of nature. There is a species of lark that breeds in the vicinity of Labrador and Hudson's Bay, which has some of the musical habits of the sky-lark. But though they have been occasionally heard to sing in New England, while on their passage to a southern latitude, in the month of October, they cannot be reckoned among our own singing birds. The whippoorwill is our Philomel, though his monotonous notes hardly deserve to be called a song. There is a species of snipe in this country, which has some of the habits of the sky-lark, rising like that bird, not in the morning, but in the evening, just after dark. After chirping awhile, he commences a spiral flight upwards, beginning in a wide circle, which continually narrows as he ascends, until he has arrived at the summit of his flight. He then sustains himself in a hovering position for the space of about half a minute, chattering and chirping very agreeably; after which he descends in a spiral flight to the ground. This amusement is continued for the space of two or three hours.

The little hair bird that sings incessantly in the mornings of spring and early summer, often utters his single trilling note, at intervals throughout the night, in May and June; but his notes are not much louder than those of a grasshopper. The rose-breasted grossbeak, whose notes I have never had the good fortune to hear, is said to be a nocturnal warbler. This bird is seldom seen in the New England states. It is said to frequent the remote northwest territory; and the species is numerous in the forests along the south shore of Lake Erie, where it breeds. These birds are said to pass the greater part of the night in singing, in the most delightful manner.

The ornithologists of the old and new continents have long been at variance in their opinions of the comparative merits of their native singing birds. Buffon, who wrote, not from his own observations, but from the accounts of travellers, declared the birds of America to be unmusical. This was the general opinion of Europeans, until Alexander Wilson published his work on the Birds of the United States. Wilson was a Scotchman, and was familiar with the notes of the European warblers, having been from his early youth an ardent lover of nature and a curious observer of the habits of birds. He pronounced the birds of this continent to be superior to those of Europe in their powers of song. Other European naturalists have declared in favor of their own birds. Audubon subscribes to the opinion of Wilson; but I am inclined to believe that both of these naturalists were misled by their own enthusiasm, and by their attachment to the American birds with whom they had been so long familiar. I doubt whether we have a single warbler whose native notes equal those of the nightingale, or of either the skylark or the woodlark of Europe. At the same time, I am prepared to say that I believe no bird on the face of the earth, can be found, any part of whose song is equal in mellowness, plaintiveness, and in what is generally understood as expression, to the five (5) strains, never varied and yet never tiresome, of the common, little, olive-colored wood-thrush.

The powers of the American mocking-bird are unquestionably overrated. His native notes do not differ materially from those of the ferruginous thrush; but he has more power and compass than the latter, and is a more inveterate singer. The mocking bird has the defect of all the American thrushes, except the wood-thrush, which is a want of continuity in their song. Their different strains are separated by a pause which greatly injures their effect. Hence they appear to be wanting in enthusiasm, never warbling as if in exstacy, like the bobolink, the grass-finch and the canary bird. The imitative powers of the mocking bird are chiefly confined to the imitation of separate sounds. He will imitate the crying of a chicken, the mewing of a cat, the whistling of a quail, and the single strains of many other birds. But he is never heard to give a perfect imitation of the continued song of any bird whose notes are difficult of execution. This the bobolink, when caged, and several other birds, will do to perfection.

The following Table of the comparative merits of the British Singing Birds, was prepared by Hon. Daines Barrington. The Table of the American Singing Birds, I have prepared after the manner of Mr. Barrington's Table, but do not design it as affording any criterion by which the British birds may be compared with those of our own country. If these two tables be generally correct, it will be seen that the thrushes which take the first rank among American singing birds, take only about a third rank among those of Great Britain. Two of the most celebrated warblers among the latter,—the nightingale and the black-cap,—are *Sylvias*, while there is not one species of this tribe in New England that is remarkable for its powers of song. The birds that make the greater part of the melody that pervades our woods and fields in New England, and which would be the most sadly missed, if their species were to become extinct, are the common robin, the grass-finch and the wood-thrush.

Table of the comparative merits of British Singing Birds, in which 20 is supposed to be the point of perfection. By Daines Barrington.

	Mellowness of Tone.	Sprightly Notes.	Plaintive Notes.	Compass.	Execution.
Nightingale, - - - - - -	19	14	19	19	19
Sky-Lark, - - - - - -	4	19	4	18	18
Wood-Lark,- - - - -	18	4	17	12	8
Tit-Lark, - - - - - -	12	12	12	12	12
Linnet, - - - - - - -	12	16	12	16	18
Goldfinch, - - - - - -	4	19	4	12	12
Chaffinch, - - - - - -	4	12	4	8	8
Greenfinch, - - - - - -	4	4	4	4	6
Hedge Sparrow, - - - - -	6	0	6	4	4
Aberdavine, or Siskin, - - -	2	4	0	4	4
Red Poll, - - - - - -	0	4	0	4	4
Thrush, - - - - - -	4	4	4	4	4
Blackbird, - - - - - -	4	4	0	2	2
Robin, - - - - - - -	6	16	12	12	12
Wren, - - - - - - -	0	12	0	4	4
Red Sparrow, - - - - -	0	4	0	2	2
Black-cap, or Mock Nightingale, -	14	12	12	14	14

Table of the comparative merits of American Singing Birds, prepared after the manner of the preceding Table, in which 20 is supposed to be the point of perfection.

	Mellowness of Tone.	Sprightly Notes.	Plaintive Notes.	Compass.	Execution.
Mocking Bird, - - - - -	18	12	4	19	12
Red Thrush, - - - - - -	18	10	6	14	12
Wood Thrush, - - - - -	19	4	19	4	4
Hermit Thrush, - - - - -	18	4	12	12	8
Cat Bird, - - - - - -	4	6	4	6	6

TABLE—*Continued.*

	Mellowness of Tone.	Sprightly Notes.	Plaintive Notes.	Compass.	Execution.
Robin,	18	8	10	8	8
Song Sparrow,	6	10	8	4	4
....	..	..	..	..	..
Grass Finch,	12	14	12	12	12
Field Sparrow,	16	8	14	10	10
Hemp Bird,	6	6	4	6	6
American Linnet,	12	12	8	8	12
Bobolink,	10	18	0	10	12
Wren,	6	16	0	9	9
Red-eyed Vireo,	6	4	2	6	6
Common Vireo,	6	4	4	4	4
Indigo Bird,	4	2	0	2	2
Yellow Throat,	2	2	0	2	2
Golden Oriole,	12	12	0	4	4
Red Bird,	12	4	0	4	4
Blue Bird,	18	0	8	2	2
Whippoorwill,	10	0	10	2	2

Beverly, July, 1854.

ART. III. *Pomological Gossip.*

NOTES ON STRAWBERRIES.—The strawberry crop for the present year has been far below the average, not only in quantity but in quality. Many plantations, particularly of early sorts, have scarcely borne enough to pay for gathering. Later kinds have done better, though a small crop. The blossoms did not appear to set well, probably from the effect of the cool dry winds and slight frosts in many places in the neighborhood of Boston. The Boston Pine, which we have never known to fail in producing an abundant crop, yielded very sparingly, notwithstanding the vines were one sheet of bloom. That this deficiency was caused by cold weather, while the plants were in bloom, we have no doubt, as beds closely planted so as to protect the flowers, bore much larger crops than those in single rows. There has been an abundance of moisture, but the fruit would not swell up and ripen off.

In consequence of such a failure in the crop we have not had so good an opportunity to test several new varieties which we added to our collection last year as we had anticipated; but so far as we could form an opinion, from the supply of fruit, we have done so, and now give the results of our examination.

Nicholson's Ajax.—A large dark colored fruit, of a blunt ovate form, with a deep colored flesh, well flavored and good. The berries were not up to the size we expected, but this was undoubtedly owing to cultivation. The vines are not as hardy as our American seedlings; though they stood the winter with a slight protection very well. We think it will prove one of the best English varieties.

Nicholson's Ruby.—A medium size, bright colored berry, of a long ovate form, similar in shape to Scott's Seedling. Flesh juicy, rich and excellent. Vines about the same hardness as the Ajax.

Goliah.—A very large, coxcomb shaped, bright scarlet berry, with a rather firm flesh and fair flavor, similar to the British Queen, but hardier, and apparently more suitable for general cultivation.

McAvoy's Superior.—This is the only one of the late Cincinnati seedlings which appears worthy of cultivation. This season it has done better than the previous one; but it does not meet the expectations of amateurs. It is of good size, but rarely fills up well, being imperfect at the point; it is also rather acid, and too soft for a market fruit. It is a productive variety, and very hardy.

Scott's Seedling.—This new variety, which we briefly noticed last season, (Vol. XIX, p. 543,) and which was offered for sale for the first time last spring, appears to be a great favorite. All who have eaten the fruit, brought to market by Mr. Scott, pronounce it fully equal if not superior to the character we gave it. It is an early variety, and in common with other early sorts, suffered the present year by the cold weather of May, to such an extent that not more than half a crop was gathered; the average size was not so large as usual, but in quality there was no falling off, and from various amateur cultivators we have heard the highest praise of its merits. We are glad to know it has given such entire satisfaction, as our artist Mr. Sharp has made a beautiful drawing of the fruit, which will appear in a future number of the *Fruits of America*.

HOVEY'S SEEDLING AND BOSTON PINE STRAWBERRIES IN OHIO.—An old strawberry like the former of these, now twenty years before the public, and so well known everywhere, it would seem superfluous to notice it again; but our Ohio friends appear so determined that it shall not be the acknowledged standard of excellence, that we copy the following from the *Ohio Farmer*, published at Cleveland, and edited by Mr. Brown, one of the best cultivators in that region, to show how it is estimated there.

The President of the Pittsburgh Horticultural Society sent the editor an account of the strawberry exhibition in that city, with a request that the editor would give his opinion as to the best varieties of strawberrries in that region: the following is his reply:—

" In regard to strawberries it may be truly said, 'many men, many minds.' We have cultivated the fruit more or less, for family use, for thirty-five years, at the East and at the West, and give the preference to *Hovey's Seedling*. Some complain that it is apt to be winter killed. We cover it slightly in November, and have no difficulty of that sort. Burr's New Pine is a most excellent strawberry, and earlier than the Hovey. It is also of good size.

The Boston Pine, originated by Mr. Hovey, is a fine fruit, and is said to be coming into much favor about New York, for market purposes. Little of it has been seen here.

We must add that HOVEY'S SEEDLING has been with us considerably larger than those at the Pittsburgh Exhibition.

Since writing the above we have seen some of our principal fruit dealers. They concur in saying that HOVEY'S SEEDLING *is preferable to all other strawberries in this market.*"

New English Strawberries.—The past spring we received from the raiser, Mr. Nicholson, two more of his seedling strawberries, and also the Prince of Wales, raised by Mr. Ingram, gardener to the Queen, at Frogmore. Mr. Nicholson in his letter writes us, under date of January last, that "his soil is first-rate for strawberries, and that he has grown the Ajax, (above named,) to *nine* inches round, weighing 2¼ ounces"! All these sorts have been highly commended by English cultivators, and we hope they will prove to be fine sorts for our climate.

Capt. Cook, (Nicholson's.)—A first rate market fruit; color, scarlet; very large size, great bearer, and bears carriage well. Plants remarkably strong and hardy.

Fill-Basket, (Nicholson's.)—Nothing can surpass this fine sort as a market fruit; in color it is a very bright scarlet; general shape round; gets very large, but never out of shape; excellent for preserving; a tremendous bearer, and will bear carriage a great distance. Plants very robust and healthy.

Prince of Wales, (Ingram's.)—A fine early variety; fruit of medium size, deep scarlet, and of fine flavor; specimens exhibited before the London Horticultural Society attracted much attention.

The Concord Grape.—Nothing has afforded us more amusement than Dr. Warder's acknowledgment of the receipt of one of the vines of this variety, presented to him by Mr. Bull. The Doctor has such confidence in that "good authority" with which the world is informed that this grape *is* "somewhat foxy" (meaning, we presume, the "*one word about grapes*" article of M. P. Wilder in the *Horticulturist*,) that he, even in his sunshiny nature, forgets the old adage, and for once not only "looks a gift horse in the mouth," but actually stares at him with both eyes wide open. "With due deference to brother Hovey," says the Doctor, "I may be permitted to suggest that I have great apprehensions as to my being able to produce fruit that shall compare with his picture of the Concord Grape." Now, Dear Doctor, suppose we should say "that same" about your darling protegé, the McAvoy Superior strawberry, as figured in your January number? Would not you be down on us? Suppose, again, we should say "it is bad policy for dealers to send forth exaggerated statements as to the qualities or merits of new things, at the risk of public disappointment." If this *should* be true—and why should'nt it if "good authority" says so—about the Concord Grape, would it be any more discredit to the "dealers" than it would be to a society who should not only recommend a secondary thing, but give it a $100 prize to make it sell? "Our four years' experience," as you say about the Diana, with the McAvoy, "suggests this caution."

TAN FOR STRAWBERRIES.—Mulching tan with strawberries was considered by the late Mr. Downing as the *sine qua non* in the culture of this fruit, and he did not fail to recommend it on all occasions; and to confirm his opinion he quoted Dr. Hull of Newburg, who had great success in their cultivation. It appears, however, by a late number of the *Horticulturist*, that Mr. Barry has paid a visit to the garden formerly occupied by Dr. Hull, in order to see the results of the Doctor's management. The gardener informed him "that the crop was smaller than usual, as the bed was old, and many of the best plants had died out. He spoke unfavorably of the use of tan,—thought it killed the plants, in many cases, and said Dr. Hull had changed his views in regard to its effects." He thinks, and so does Mr. Barry, that one of the chief causes of Dr. Hull's success was his deep trenching (four feet) of the ground [!] and enriching it with well prepared composts, &c.

A reference to our last volume (XIX, p. 7,) will show our opinion of the Doctor's efforts in strawberry culture. We then remarked, that "when he had raised as large strawberries as we had, without any of the gimcrackery of cider, tannic acid, &c., we would believe he had done something towards establishing the truth of the theory of specific manures." It now appears that in addition to all his applications of lemonade, tan, &c., he had a trenched soil four feet deep! Yet he failed to raise only moderate sized fruit, much inferior to what we have raised on an *untrenched* soil, scantily manured!

McAvoy's Superior Strawberry.—Dr. Warder in the June number of his excellent Journal, states that, "unwilling as he is to wound the feelings of the worthy man and excellent pomologist who conducts that Journal (the *Horticulturist,*) he does '*dare*' to say what is right, in full confidence that Mr. Barry will agree with him," that his figure in his January number was correct. Mr. McAvoy has stated that "the picture in the Horticulturist did not in the least resemble the fruit of his celebrated seedling."

Belle de Noel, or Belle apres Noel Pear. This new pear, which we have before noticed, is highly recommended by Mr. W. Reid, of Elizabethtown, New Jersey, who is a good judge of a fine fruit; he writes us, under date of May 1, that "this is one of the best keeping pears that I have yet tried; my last specimen I cut this evening; it is fine grained, and from what I have seen of it, am inclined to think that it will prove one of the most valuable late pears in cultivation."

Its name, "Beautiful after Christmas," is well given, for it is a very handsome fruit, having a deep yellow skin, and a glossy red cheek.

The Grape Crop in Ohio.—We regret to learn from Dr. Warder's *Journal* that apprehensions are entertained as to the result of this important product already; that, however good some vineyards may be, the general average will be a short one. Many vines have died outright; many are badly furnished with fruitful branches, owing to the frost; and now the mildew, and after it the *rot*, have each left their desolating mark upon the swelling berries. At a meeting of the Vine Growers' Association, it was agreed that the mildew was worse this year, and affected the grape more badly than usual, especially attacking the smaller grapes and weaker shoots.

Large Bunch of Black Hamburgh Grapes.—The largest cluster of grapes, of this fine old variety, we have ever seen, was exhibited by Ignatius Sargent, Esq., on the 22d July. It weighed *seven and one half pounds!* The berries were of good size and very well colored, though not black. We believe this is as large a cluster of the Black Hamburgh as has ever been produced.

ART. IV. *The Hollyhock; its Improvement and Cultivation.*

Fig. 16. *The Hollyhock.*

WHO that has ever cultivated the smallest flower garden, is not familiar with the hollyhock? Among the earliest introduced of ornamental herbaceous plants, and the easiest cultivated, it has been, for years, the constant ornament of the smallest as well as the largest gardens; lifting its tall and majestic stems above its more humble companions, defying, apparently, the roughest treatment, yet ever gay, attractive, and conspicuous, by the grandeur of its habit, and its massive plumes of crimson, white, or yellow hues.

But the hollyhock until very recently, and even now, except with amateurs who keep pace with the improvements in plants, is just the same flower it has been for a century or more; its blossoms are principally semidouble or single, and little or no pains have been taken to improve and beautify it, or elevate it to a higher place in the flower fancier's regard. Even in England, where its introduction has been traced back three hundred years, it remained without scarcely any improvement worth naming, till the commencement of the present century, when gradually the real merits of this old favorite became apparent, and within a very few years, through the exertions mainly of one humble cultivator, it has taken its rank among the florist's flowers, with its compeers the dahlia and the tulip.

Any one who cultivated the dahlia twenty-five years ago, would scarcely believe it could have ever been brought to the perfection it has since attained ; and those who know the hollyhock as usually cultivated have as little idea of the improvement which has taken place in this flower. Our vignette at the head of our article will convey some impression of the change, but it really should be seen to obtain a complete knowledge of its beauties.

Believing that the hollyhock is destined to become as popular as the dahlia, we have thought we could not perform a more acceptable service to our readers, than to lay before them some account of its growth and mode of cultivation, and we could not better do this, in the absence of extensive experience by our own cultivators, than to copy the most reliable information from our transatlantic friends, who have done so much to bring the hollyhock up to its present character; and we extract from a little pamphlet entitled "*An Hour with the Hollyhock*," by W. Paul, a successful cultivator of this flower, the following routine of treatment, with the preliminary remarks on its rise and progress to its present state :—

HISTORY OF THE HOLLYHOCK.

The hollyhock (Althæa rosea) belongs to the natural Order Malvaceæ, and in the Linnæan classification of plants we find it in the Class and Order Monadelphia polyandria. In the Botanical Catalogues it is described as a hardy biennial with red flowers, blooming in August, indigenous to China, first known in England in 1573. Dr. Turner, however, in a work published in 1564 (nine years earlier!) speaks of it as a well-known plant. According to these authorities, then, it is no new candidate for popular favor. But we think it may lay claim to a still higher antiquity. What other flower can be meant by that which Pliny writes of in the fourth chapter of his twenty-first book as a rose with the stalks of a mallow and the leaves of a pot herb?

The old English writers spelt the word hollihocke, holyoak, and holyock, whence it is supposed to have been derived from the Saxon 'Holihec.' Linnæus considered it a distinct genus, and named it Alcea, from the Greek word 'Αλχή, in allusion to its medical properties, on account of which it was formerly much valued.

It is evident that at the close of the sixteenth century the hollyhock was much prized and generally cultivated; for Gerard, writing at that time, states that it was then sown in gardens almost everywhere. In Gerard's *Herbal* (edition 1636) are three plates of hollyhocks; "the single garden hollihock," which we assume to be the type of the garden varieties of our day; "the jagged strange hollihock," whence apparently have descended sulphurea palmata and others of that strain; and "the double purple hollihock." The writer also speaks of another, "which bringeth forth a great stalke, of the height of ten or twelve feet, growing to the form of a small tree." "The flowers are very great and double, as the greatest rose or double peiony, of a deepe red color, tending to blacknesse."

It is scarcely necessary to say that the hollyhock is not indigenous to Britain. Linnæus assigns it to Siberia; but China is generally given as its native place. In the South of China it is found only in a cultivated state: the northern parts and Chinese Tartary are more correctly the districts it naturally adorns. It does not appear to extend to Japan; for in Thunberg's "Flora Japonica" it is spoken of thus: "Crescit ubique *culta*. Floret Iunio Iulio. Variat floribus, albis, rubris, plenis et simplicibus." The French ascribe it to Syria, and plants bearing yellow flowers have been found wild among the rocks around Kurreechane.

IMPROVEMENT OF THE VARIETIES.

We think, from the evidence afforded, we shall not exceed the bounds of truth in claiming for our flower a three-hundred years' residence on British soil. We can imagine how much it would be cherished on its first introduction, though the flowers were but single, and probably dingy in color. Still it was a stately plant, tall, majestic, and not without a share of massive grandeur, which would well adapt it for the decoration of early British gardens. Like most popular flowers of long standing, we have no sources whence to draw the materials for the history of its early development. Such events were not chronicled in the olden times; and hence, for want of facts, we must be content to suggest probabilities, and drop the early links in the chain of history. Starting from the period of its introduction, and spreading its culture over a few years, it is not difficult to imagine it becoming varied in color, increasing in size and fulness as the natural result of cultivation. This would likely increase the number of admirers, which would give fresh impulses to the cultivator, and thus hasten on its civilization. This state of gradual improvement probably went on extending over a space of 250 years, and might have continued to this moment, had not one cultivator stepped out of the beaten track, and, working free from professional trammels, followed a course of culture dictated by his own observation and experience. This man was Mr. Charles Baron, a man unversed in garden-literature, unused to move among the skilled in the hidden and mysterious art, and probably knowing little of the vegetable kingdom beyond what existed within the boundary of his own small garden-plat. The hollyhock was his favorite flower; to attend to it was his recreation; his labor was a labor of love. And thus the humble shoemaker of Walden, by concentrating his attention on a single species of plant, soon distanced all competitors, and originated those flowers which form one of the most striking and gorgeous features of modern flower-gardens. To rightly appreciate his labors, we must not compare his seedlings, known as Model of Perfection, Rosea grandiflora, &c., with those figured in Gerard's Herbal, in which the loose flowers, sparsely scattered along the stem, nod and droop at the bidding of every breeze, but with those of other cultivators of the same date. The distinguishing characters of his kinds are their more perfect form, greater substance, closer arrangement of petals, and greater proximity of the flowers on the stem. Hence, they would appear in advance of others in every important point. But we must not suppose this improvement to have been the offspring of a single effort. From month to month, and from year to year, did the indefatigable cultivator toil, and the result is a monument of *perseverance*, as well as skill. As we look upon this flower in its improved condition, we cease to wonder at the rapid increase in the number of amateurs for what other surpasses it for warmth of coloring, symmetry, and magnificence. We do no know that we could do better than quote here the remarks of a contemporary writer.* "The hollyhock, for several years past, has had much to complain of from the undue neglect with which it has been treated. Here and there it has found a discerning patron; but, generally speaking, the floral world has been influenced by a dahlia excitement, from which it is now subsiding in sober disposition to judge all flowers by their respective merits. The rose is again the queen, and the hollyhock is again at court." It is true the dahlia and the pelargonium have each their peculiar beauties, but they, in common with many others, are robbed of their gay attire by the first breath of winter; but the hardy nature of the rose and the hollyhock carries them forward fresh and beautiful throughout the chilly months of autumn. When others languish and decay, they fearlessly confront the blast: their many-colored blossoms often enlivening, for a long period, the desolation caused by a single frosty night.

It is said that fine hollyhocks have been originated in Scotland and in France during the last few years. In the autumn of last year we saw the most celebrated collections in both countries, as well growing as on the exhibition tables. There are two distinct strains in Scotland. The varieties of the one strain, although superior to the common English kinds, are inferior to those of Mr. Baron: those of the other have sprung from Mr. Baron's stock. Mr. Deans, of Jedburgh, informed me last year that he had sown some of Mr. Baron's seed years ago, and showed me the stock raised from this sowing. Some of them, while bearing different names, appeared identical with the English kinds, which appearance is supported by the fact, that certain kinds are reproduced true from seed. But if not identical—a point difficult to pronounce upon when we consider the variation of soil and climate—they certainly bear a close resemblance. It is not my wish to depreciate the varieties of Scotch origin. I have seen large and handsome flowers in Scotland, and believe that some of those first offered for sale this year are of still greater worth and beauty. But it must be told that the northern and southern florists do not altogether coincide in their ideas of a perfect flower, and each judges according to his own standard.

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* The "Botanic Garden," by B. Maund, F.L.S., No. 977.

CULTIVATION.

This notice will, perhaps, be thought sufficiently extended, and we proceed to lay before our readers a brief account of the culture of this flower. In passing, we may, perhaps, be allowed to state our views of the purposes to which the hollyhock may be applied in garden-decorating, and the positions it is best suited to occupy.

We do not remember that we were ever more struck with the effective aggregating of this flower in garden scenery than by the introduction of a round clump among trees, shrubs, and dwarf-flowering plants at Haddo House, Aberdeenshire, the seat of the earl of Aberdeen. It was in October, and the foliage of the trees around was glorious: the leaves had assumed the tints peculiar to that season, and, "touched by autumn, seemed as they were blossoming hues of fire and gold." The flower-beds beneath were in dazzling glow, scattered like so many separate pictures over the lawn, whose verdant and smoothly-shaven surface grouped them in a neat but agreeable frame. Beautiful as were these features, viewed individually, we felt a want of continuity, a sense of incompleteness, until the eye fell upon a group of hollyhocks, which, towering aloft, blended harmoniously with trees and flowers, producing a perfect whole. In this instance, various colors were placed in the same bed, which was in good taste; but we can conceive of circumstances in which several clumps widely dispersed, each filled with a single color, would be more effective.

The hollyhock is also a capital plant for the borders of plantations or shrubbery walks: it forms a finer distant object in such situations than the dahlia, is less lumpish, and continues blooming to a later period of the year. Again, it may be planted to advantage in the back ground of an herbaceous border, so that the lower part of the stem is hid from view by the plants in front. In both these situations they may be planted singly, in irregular lines, or groups of three or five. And here, perhaps, the less choice kinds are more in character than the finest, as a high state of culture is neither convenient nor expected. To be effective *en masse* is all that is looked for, and the showiest kinds should be chosen, and left to assume their natural form of growth.

It is sometimes said that it is not a suitable plant for small gardens. We think, however, it may be agreeably disposed in such in avenues, or in groups near the boundary, filling up in front with dwarf shrubs, herbaceous, or summer-flowering plants. It appears to us anything but difficult to effect such an arrangement with this plant as shall relieve the flatness often so tiresome in small gardens.

The amateur, who cultivates with the view of producing the flowers or spikes in the highest state of perfection, will probably prefer planting in square beds or rows. This is convenient for shading, and places the whole under his eye at one time. If planted in beds, set them three feet apart; if in rows, three feet from plant to plant, and four feet from row to row, that one may walk conveniently between them.

In regard to the soil suitable for our flower it happily is not over fastidious in this respect. It is a gross feeder, as its fleshy porous roots and large soft leaves, with high perspiratory powers, abundantly testify. It is found to thrive well in common garden soil, although, if a choice is at hand, *loam*, sandy rather than clayey, may be preferred. We need, perhaps, scarcely say, that a situation airy, and freely exposed to the sun, is indispensable if we wish to carry culture to the highest pitch of success.

As our remarks are intended for the guidance of the beginner, we will suppose him to have obtained a supply of plants in October, and from that period we will trace their culture. First, let us ask, "Have these plants been raised from cuttings or from seed?" Seedlings we think preferable, where the correctness of the varieties can be guaranteed by *the raiser having previously bloomed them;* but, as some kinds only are re-produced true from seed, it is likely the stock will consist partly of plants raised from cuttings.

In preparing the ground for planting, it should be dug two-spit deep. Where spring planting is intended, throw up the earth in ridges in autumn, that it may become mellowed by the winter's frost. In all cases this practice is beneficial, but it is especially so where the soil is of close texture or retentive of moisture. A good dressing of manure, not too far decomposed, may be strewed over the soil previous to ridging, and mixed in during the operation. One advantage of this is, the manure will keep the clods light, and give the sun and air a freer entry; and, farther, the soil will become more evenly impregnated with the nutritious properties of the manure as they are washed down by the rain. One point in planting, of too great importance to be overlooked, is the state of the ground. To use a common gardening phrase, the earth should "move like an ash-heap" at the time this work is done: rather would we wait a fortnight beyond the most advantageous season, than plant when the ground is wet or clammy. The plants should be set firmly in the ground, not too low, pressing the soil well round the neck by a gentle stroke of the foot. This done, watering must be attended to, if the season be dry, using weak liquid manure, breaking the surface of the ground with a hoe the day after the water is given. Frequent loosening of the surface of the soil is indeed an important part of culture, and should be attended to throughout the whole of the growing season.

Unless the plants struck in spring and summer can be planted out not later than October, we should advise their being kept in pots under glass during winter and transferred to their permanent places in the month of March. Vigorous healthy plants, when well established, seldom suffer much from the frost of winter when growing in the open air; but where the sorts are delicate, the plants feeble, or not well rooted, it is far otherwise. We know an instance of an amateur losing nearly one-half of his stock during winter, the plants being in the condition last described. In all cases it is a wise precaution to earth up the plants remaining in the ground at the close of autumn, that the rain may not settle around them; and if a few small hand-glasses can be spared to shelter the rare or delicate kinds, so much the better. *Bloomed* seedlings are almost invariably strong, and may be transferred to a permanent situation in the garden immediately that the flowering is over: other seedlings, whether raised in autumn or spring, should never be planted out until the end of April.

When transplanting is done in the autumn, the plants should be guarded during the first winter against the injurious effects that may arise from the changes of the weather. When a sudden thaw succeeds frost it is no uncommon thing to find the plants upheaved, and their roots greatly exposed. It may sometimes be advisable to replant them; but in most cases the necessary end may be attained by drawing the soil around them, and pressing them firmly with the foot.

It is worthy of remark that the season of flowering may be greatly prolonged by striking and transplanting at different seasons. There is a difference of at least six weeks in the period of flowering between plants removed early in autumn and late in spring; and of this we may avail ourselves to lengthen the succession, or to obtain a full bloom early or late, as particular circumstances may require. Early-rooted cuttings and old plants may be induced to bloom in July, and late-rooted cuttings and spring-sown seedlings in November. Hence there will be no difficulty in obtaining a supply of flowers for four successive months.

Every flower has its enemies. The dahlia has to battle with the thrip and earwig; the pink and carnation require protection from the wire-worm; the enemies of the rose are "legion;" and the hollyhock suffers from the slug. It is in winter and early spring that these creatures feast on the leaves with most relish; and as a preference is shown to the youngest, the loss is the greater, for they are most actively engaged in administering to the wants of the plant. Happily for us our enemy is not remarkable for agility. Slug-traps are numerous, and well known to all who possess a garden. A pair of keen eyes, aided by a bright light in the morning or evening during moist weather, proves a most effective method of checking their ravages. A less troublesome one is, perhaps, to strew a few cabbage leaves around the plants: beneath these the little animals take refuge, and may be easily caught and destroyed. Some are exceedingly minute, and to guard against them, it is well to strew lime, wood-ashes, or soot around the plants.

Fogging of the leaves in winter is very prevalent among hollyhocks. The plant is then in a state of comparative rest; the leaves are very apt to decay; and, if they are not speedily removed, the contagion spreads. As a preventive of this evil, the frame should be set in a sunny place; and too much air can scarcely be given, provided moisture and severe frost be excluded.

As frost is not unusual in the month of March*—the time we recommend for spring planting—the plants which have been brought from a frame will still require some protection. For this purpose an inverted flower-pot answers admirably. It may be placed over the plant in the evening, and removed again with the rising of the sun.

But while paying proper attention to the young plants, from which we expect the finest blooms, we must not forget to administer to the wants of those which have gladdened us with their blossoms during the preceding year. The ground, especially if there have been many visitors, will be trodden firm, and should be well broken up with a fork early in March. A good dressing of manure should be worked in during this operation. The hollyhock is not a flower that will long lie dormant beneath the influences of the sunny days of spring. Soon the flower-stems begin to rise, and often so numerous that it will be necessary to remove some. This should be done so soon as they are sufficiently formed to enable one to judge which will be the strongest. Allow no plant to develope more than three spikes, some two only, and a weak plant one. The most of the leading modern kinds commence the formation of flower-buds at about two feet from the ground. If the situation be at all exposed, the spikes must be tied to stakes at an early period: the first tie may be advantageously made at the height of about fifteen inches. At this period of growth the wood of the stem is soft, and the tie should be made with a broad band of bast, not twisted, and so made that it will slip up the stake as the stem rises. As the stem cannot be drawn close to the stake without injuring the flowers, two stakes will be necessary where one stem only rises from a plant. The stakes should be placed opposite, and the stem brought between them, so that the three objects form a straight line: pass the bast round the stem of the plant, drawing it to the one stake; and perform the same operation a few inches higher up, tying in the opposite direction; and so on, tying to each stake alternately as the stem rises. When two or three stems rise from one plant, three stakes will be necessary, and they should be placed triangularly, tying as before.

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* April in our climate.—Ed.

The flowering season, then, is at length arrived, and with what pleasure do we hail the first flowers as they break upon the sight. With their expansion we feel rewarded for the year's toil. What symmetry of form marks our choicest productions! What variation, and what delicacy of hue, pervade the assembled mass! Well may we exclaim as we admire—

> "Who can paint
> Like Nature? Can imagination boast,
> Amid her gay creations, tints like these?"

The interest increases day by day; every visit, however oft-repeated, discloses some new candidate for admiration—

"something to please and something to instruct"—till, from the solitary flower blushing at the base of the stem, the flower-stalk rises a column of beauty. The stem, at the time of the expansion of the first blossoms, is probably five or six feet high; and, as we count the rows of embryo flowers which stud its length, and know that they will still expand, we wonder when and where our joys will come to an end. The arrival of winter alone is likely to stay their unfolding, and that is too far in the distance to mar our present enjoyment. It should be our aim to preserve the column as perfect as possible. If any flowers expand irregularly, of bad color or form, they should be immediately cut out, when the space created by their removal will be filled up by the fuller expansion of the surrounding flowers.

RAISING NEW VARIETIES.

If the cultivator have the leisure, or be fond of employing himself among his flowers, he will find an ample field for amusement in the crossing of the various kinds, with the view of obtaining novelties and improvements. If this end be contemplated, we should advise a separate plat to be set apart, however small, that he may carry on his plans unmolested. Other advantages likewise accrue from this arrangement. First, no shading is necessary; it would, indeed, be injurious. Then the finest varieties may be set together beyond the fertilizing influence of the inferior ones. Again, the best situation for obtaining seeds is a warm sunny border, with a rather dry soil, but such is not the most suitable for the production of large handsome flowers. Perhaps we could not raise the question, "What constitutes a good hollyhock?" more opportunely than at the present juncture; for without a distinct conception on this point much labor in hybridizing will, to say the least of it, be but ill-directed. I am indebted to three leading cultivators for opinions on this subject; and, after presenting these, I shall offer a sketch of my own idea of a perfect flower. Mr. Downie, of Edinburgh, writes—"The following is what I consider the properties of a first-rate flower—

"1. The diameter of the centre should not be less than three inches, and the outline not less than half a globe: the florets of which it is composed should be thick, dense, whole on the edges, and entirely free from fringe or serrature.

"2. The principal, or guard-petals, should not extend more than from a quarter to half an inch beyond the outline of the centre: they should be thick and flat, forming a circle, and entirely free from notch or serrature.

"3. Size is a distinct property: when equal in other respects, the larger the better."

In addition to the points already named, we would say that the color, whatever it may be, should be clear and decided. In striped, veined, mottled or shaded flowers, the ground and overlaying color should be distinct and well-defined, free from all confusion. The guard-petals should be of great substance, neither ridgy, serrated, nor curled. I should like, also, to see the flowers of increased substance, free from pockets, and of dwarfer habit. We look for great improvement in this latter point. Viewing the plant merely as an object for garden-decoration, the height to which it grows is perhaps no disadvantage, but often a recommendation. When rising behind dwarfer plants, it indeed presents a noble appearance, and may justly be styled the monarch of the garden. But as a florist's flower, we hold this to be an objection, and to the correcting of this point the attention should be directed. It is probable that important results would arise from hybridizing with the dwarfer species, or saving seed from the dwarfest varieties.

With a camel-hair pencil, we are prepared for crossing. The best time for carrying on this work is the morning, and so soon as the dew passes from the flowers. There are, perhaps, no varieties, however double, which will not yield stamens or styles to a close inspection. It is only necessary to collect the pollen from the stamens by passing the brush lightly over them, and to convey it to the flower required to produce seed. Such kinds as are not very double, and seed freely, may be grown in a rich soil, and the spikes may be shortened, leaving, after thinning, about twelve flowers on each. Never allow a bad or imperfect flower to remain for seed: invariably pull off such immediately that it appears. The very double kinds may be grown in a poor soil. The spikes should not be shortened, but the flowers of all will require a plentiful thinning. As the flowers at the lower end of the stem die off, the petals should be drawn from the calyx, to prevent moisture from gathering round the seed-vessels, which would injure, if not destroy, the seed. Hand-picking is, perhaps, the best way of accomplishing this; and if the petals are ready to be separated, they will yield to a slight pull with the thumb and finger. Crossing may be repeated day by day, as the flowers expand, until we reach the top of the stem. The plants should be watered freely during the formation of the seeds; and as the latter ripen (the shrivelling of the calyx is a tolerably correct test of fitness) they may be gathered, and tied in coarse muslin bags, separately or not as the cultivator may please, and placed in a dry, airy, sunny situation. With such as flower late the spikes may be cut from the plants, and placed upright in a greenhouse, or under a south wall, where the seeds will ripen better than if detached from the stem. The seeds first gathered may be sown immediately, as there will be time for them to germinate and become strong before the commencement of winter. The bulk of the seed, however, cannot be sown to advantage before the spring; and early in March is, perhaps, the best time. In both cases we would sow thinly in pots, placing them in a pit or house, where they would command a gentle bottom heat; and so soon as four or six leaves are formed they should be transplanted, four round a 4-inch pot. Those raised in autumn may remain in a cold frame during winter; or if in a greenhouse, they should be placed close to the glass, and freely exposed to air and light. Watch closely for slugs, and remove any leaves that may decay. In April they may be transferred to the spot where intended to flower; and to do them justice, they should not be planted closer than two feet from row to row, and one foot from plant to plant. They should be watered and hoed frequently during the summer, and tying up can scarcely be dispensed with.

They will flower in September and October of the same year; and as any exhibit themselves of inferior merit they may be destroyed, which will give the remaining ones more room for development. Some varieties come true from seed, or so nearly so that it would require the most practised eye to distinguish them; others come true in color, but vary much in degree of fulness and general quality; while others, again, vary both in color and quality—maroon flowers producing white, yellow, red, and the like.

PROPAGATION.

We now proceed to a few remarks on propagation.

We know of but three modes of propagating the hollyhock: 1. By seed; 2. By cuttings; and 3. By dividing the roots. The first mode has been already discussed: it remains for us to consider the two latter. Propagation by cuttings is the best mode of obtaining good plants, and the practice may be carried on from March to October. Most of the old plants give an abundance of young shoots early in spring; and so soon as these become a little hard they may be cut off close to the stem, leaving about three of the best shoots for flower-spikes. Place three or four cuttings round a 5-inch pot, in a rather light sandy soil. Plunge them in a close frame, where, in a few weeks, they will have formed new leaves and roots, and may be potted off, each in a separate 4-inch pot. As fresh shoots form on the old plants they may be treated similarly, up to midsummer, after which period we would prefer leaving the wood to become hard before making the cuttings. In the latter case a single eye is sufficient to make a plant; but the wood-shoots, and not the flower-shoots, should be chosen. It sometimes happens that the eyes developed at the base of a spike produce wood-shoots, but they more usually produce flower-shoots. The latter take root and form plants, but are not of the best description. Cuttings made from single eyes may be completely buried beneath the soil, leaving the foot-stalk only protruding above: they should then be placed in a close frame, if with bottom-heat so much the better, and the eyes quickly push through the soil, and form stout healthy plants.

These, when rooted, may also be transferred to single pots, there to await transplantation in autumn or spring, as before recommended.

Propagation by division is best carried out in autumn, immediately that the flowering is over. A large, well-ordered plant may sometimes be divided into several, but in general three or four is a more advantageous number. Nothing, certainly, is gained by breaking the old plants into too many pieces: every separate part should carry with it a good share of roots. Seedlings and others that may bloom late cannot be divided till the spring. March is, perhaps, the best time, and the fragments, if not broken too fine, will flower well during the first autumn.

It is but the few who grow for exhibition, but they are often the most ardent cultivators; and we would say a few words on this subject ere we conclude.

EXHIBITING THE FLOWERS.

There are two modes of exhibiting hollyhocks—by single flowers, and spikes. Some cultivators have advocated the withdrawal of prizes for single flowers, and depending on spikes alone. It is freely admitted that the exhibition of spikes creates a greater display, and affords a truer idea of the nature and properties of the flower. On this ground, then, we admit the desirableness of encouraging this mode of exhibiting, but doubt whether the entire exclusion of single flowers will not prevent many amateurs from entering the list as competitors. To exhibit single flowers does little damage to the garden at home, and they are easily conveyed to the place of exhibition. To exhibit spikes requires too great a sacrifice where a few plants only are grown; and moreover, they form, however closely stowed away, a somewhat cumbrous package. We know that many amateurs derive as much pleasure from the gratification they afford others by their pursuit, as in marking the brilliancy of color and symmetry of form, or inhaling the sweets of their favorite flowers. The most emulous of such would pause ere they cut twelve spikes of their finest kinds from a limited collection. They could not reconcile themselves to behold tarnished in a day what would have given pleasure for weeks, had the spikes been allowed to remain on the plants. We think, then, there should be two classes, one for spikes and one for single flowers. Make the former the more valuable prize, as it deserves to be, but do not exclude the latter.

The spikes exhibited vary in height from one to two feet. The flowers near the base of the stem are generally the finest, (although this depends in some measure on the state of the weather in which they are formed and expanded,) and consequently the aim should be to preserve such. To this end all lateral flower-spikes are destroyed, and the top is cut off the main about two feet from the lowest bud, *at the time this expands*, that the flowers may close over the top, and the spike look complete. By shading, the greater part, if not the whole of the spike may be kept in a showable condition for eight or ten days. In choosing for exhibition, whether spikes or single flowers, we should be guided by the standard previously laid down: the nearer the flowers approached to that the more perfect should we consider our stand. It may not be necessary for the mere cultivator for amusement to dive so deep into the science of floriculture, but *the exhibitor* should certainly obtain a clear conception of what constitutes a good flower before he enters the field of competition.

ART. V. *Suburban Visits.*

A RECENT leisure day afforded us an opportunity of visiting some of our suburban friends, and the brief notes we made we now jot down for the benefit of our readers.

Garden of Wm. Bacon, Washington Street, June 20th.—Mr. Bacon's houses and stores are situated on Washington street, and occupy nearly the front of one square; his garden extends in the rear for several hundred feet, bounded on all sides by streets, and contains some two or three acres. Formerly this was all marsh land, overflowed by every tide; but after the construction of the mill dam the water was shut out, and it remained a low marshy piece of ground, overflowed occasionally from the rear, and watered by a stream from above, which brought with it the wash of the high lands which border on Washington street.

Some ten or twelve years ago Mr. Bacon commenced making a garden of this low ground; the first object was to raise it above the salt water. It occurred to Mr. Bacon that *tan*, which could be had in abundance near by, and at a low price, would be just the article, and he at once commenced raising the ground with it. It seemed to answer every purpose, and gradually the work went on until hundreds of loads were absorbed in raising the premises, and fitting it for the growth of trees, which now cover it in every part.

Only an inspection of the premises will show the labor and perseverance which were necessary to reclaim such a low and marshy spot; where, a few years since, the tide ebbed and flowed, are now growing pear, plum and peach trees of large size, producing their bushels of fruit. In the loose and permeable soil, formed of tan, marsh mud and debris of the street wash, the roots of everything appear to ramble freely, and the best evidence that they are at home in such a location is the vigor of the trees, and their good crops. Mr. Bacon has taken particular pains to possess all the choice and newer pears, and we found growing here, in addition to those well known, the Swan's Orange, Grand Soleil, Beurré Langelier, Beurré Clairgeau, Triumph de Jodoigne, Merriam, Adams, Sheldon, Poire d'Albret, Collins, &c., &c. Many of the pears have not set well the present year; still, we found a good crop on some of the trees.

In addition to the fruit trees, Mr. Bacon has a large variety of flowers and flowering plants, possessing something more than that utilitarian spirit, which would transfer every flower border and parterre into a mass of pear trees, each tree being looked upon as the representative of so many dollars and cents. Mr. Bacon deserves the highest credit for the taste, labor and expense with which he has transformed a marsh into a beautiful fruit and flower garden.

Residence of R. W. Ames, Auburn Court.—Following closely after Mr. Bacon, Mr. Ames has seemed to take pleasure in testing the fact, whether true enjoyment of a good garden does not arise from having overcome the greatest obstacles to its formation. One would think so to see what Mr. Ames has accomplished: for, if fine gardens can be made with such materials, what may not be done when everything is favorable to their completion? We note them now more to show how poor a piece of ground may be made productive and beautiful, rather than from any particular features of importance, as it is only three or four years since Mr. Ames commenced the work of reclaiming his land.

Situated on the verge of the highland which formerly made the boundary of the bay, Mr. Ames's ground extends at the base over an acre or two of marsh, which occasionally was covered with salt water. So soft and comparatively bottomless was the premises, that the piles for the fence are driven twenty-three feet into the ground for a foundation. To raise it up, and make dry land, four hundred cords of tan were used, and it is now not only dry and fine, but rich and light to a remarkable degree, many of the pear trees having made a growth last year of seven or eight feet. Everything appears to thrive well, especially pears, to which a greater portion of the ground is devoted; plums looked very well, having a large crop; and a strawberry bed of only a small size had yielded upwards of one hundred quarts, and yet more to ripen.

On the high ground in front of the house, the main entrance to which is from Auburn court, are two old trees of the Bleeker's Meadow pear, which Mr. Ames finds to be very profitable, disposing of the entire crop from each tree at a price which pays as well as almost any other variety; the fruit is handsome, and always sells well.

Mr. Ames's house stands on a high elevation, originally with a bold and steep descent, to what was once the border of the flats connected with Charles river. This steep bank has been formed into two large and broad terraces, which connect it with the garden. From the house a fine view of the city is obtained.

If any one living in the near vicinity of the city, and immediately upon the border of flat lands similar to Mr. Ames's, is desirous of seeing how much can be made of such places, they could not do better than to inspect his garden, or that of Mr. Bacon, which we have no doubt they will be happy to show. A moderate expense, and a determination to reclaim a naturally low and apparently worthless piece of ground will enable the possessor of many such spots to enjoy one of the most productive fruit gardens; for if there is one thing more than another which fruit trees like, particularly pears, it is a deep and mellow soil, moist without being wet, in which the roots can penetrate and find nourishment during our annual summer droughts, so trying to vegetation.

Garden of Mr. Francis Dana.—Near to Dudley street, in the rear of the new Baptist church, is situated the garden of Mr. Dana, whose name is familiar to all pomologists, from the success which has attended his growth of seedling pears, three or four of which are among the best of our American pears, and one in particular, the greatest acquisition ever yet made to this fruit, surpassing even the Seckel. The crop is rather light this year, and the opportunity for seeing them may not be so good as last season. We have already incidentally noticed them at various times, and described his Martha Anne, and we hope to give a similar account of the others, after having had another chance to give them a trial.

Our correspondent, the Hon. Mr. Cabot, President of the Massachusetts Horticultural Society, has alluded to the success which has attended Mr. Dana's efforts in raising new varieties, (p. 131.) He has certainly, to say the least, been lucky; though we do not attribute it so much to luck as to perseverance. We have never been willing to believe the popular doctrine that seedling fruits from choice varieties would return to or approach the wild type; but that the tendency is to improvement; and that while a majority of trees raised from any particular choice sort may not be equal to the original, a few will be as good, and some show a decided superiority, either in habit, growth or quality; this, at least, has been our experience in the growth of many thousands of seedling plants and fruits. The success lies in the quantity produced; in twenty seedlings there may be no great change, but in a *thousand* there may be many; and whoever undertakes to raise seedlings of any kind must not expect to reap a golden harvest without labor. To grow and fruit a thousand trees is no small task; yet is the only way in which we can expect great results.

And, while speaking of seedlings, we may make a passing remark, that success ever lies farther back than sowing the seed. The change begins not here, but with the growth of the seed itself: thus, the seed of a fruit tree taken from a garden where there were only two other kinds cultivated, and perhaps only one of them a very choice one, would not be as likely to show an improvement, as seed taken from a garden where there were many varieties, and a majority of them the choicest kinds; and, still further, hybridization would be less likely to be effected in some gardens than others, according to the near proximity of the trees. So, too, affinity of habit is likely to affect the future character of the offspring. Two certain kinds may be fertilized which would give a better progeny than two other sorts. A poor growing choice variety, fertilized with another of similar quality and habit would probably give an enfeebled race; whilst a strong growing ordinary pear, fertilized with a choice weak growing one would give offspring, part of which would probably partake of one parent and part of the other, yet, undoubtedly, *some* of them would possess the good traits of both. Thus we see how many circumstances are likely to affect the future stock, and when this is left to *chance* the only hope of success is the growth of a great quantity from which to select. The simple fact that all our best apples are chance seedlings of our native growth, shows to what an extent improvement takes place; for in many instances, as with the Baldwin, Williams, Porter, &c., no selection was made, as they were solitary trees from a single seed.

But to return from this digression, Mr. Dana's is a perfect crowd of trees: in his attempt to fruit and test his new kinds he has grafted and regrafted his trees, cutting off even very excellent pears, in order to get his scions on strong stocks for bearing early. One or two kinds are now fruiting for the first time, and the appearances indicate some fine varieties.

Mr. Dana has also a lot of seedling grapes, from which he expects some excellent sorts, and if his success is equal to that in his growth of the pear, we may expect soon to have some desirable acquisitions to this fine fruit.

Residence of Capt. Jos. Lovett, 2d, Beverly, Mass.—For a long time we have endeavored to gratify ourselves with a visit to the garden of Capt. Lovett, so well known as one of the most thorough fruit cultivators of Essex county; but from some unforeseen cause, or want of a convenient opportunity, we have deferred it from time to time until recently, when, upon learning, as we had, to our deep regret, of the illness of Capt. Lovett, we visited Beverly to pass a pleasant half hour with him. Unfortunately, we found him unable to accompany us in a hasty ramble through the grounds; but notwithstanding this, we wended our way through the garden, and were delighted to find everything in such fine order, entrusted, as the care of everything has been for six or eight weeks, to his two young sons.

As we have said, Capt. Lovett is known as one of the best fruit cultivators in Essex county. He has been connected with the Massachusetts Horticultural Society about twenty years, and during that time has been a constant exhibitor, showing large quantities of fruit, and always of the very finest description; and we think we speak correctly when we state that no cultivator has ever placed upon the tables of the Society so little of inferior quality as Capt. Lovett. His success in growing the smaller fruits has been remarkable, some of the largest strawberries, raspberries, blackberries, gooseberries and currants that have been shown in past years have been from his garden, and they have repeatedly carried off the highest premiums. It has always been a matter of surprise with us, that he should excel with these fruits; but we found upon our visit, that the grounds of Capt. Lovett are admirably located to grow them, as well as all fruits; and though locality alone, would of course amount to but little, yet when coupled with the enthusiasm and skill with which he carried forward every gardening operation, the result could not be other than successful.

The garden of Capt. Lovett is of four or five acres in extent, and forms a kind of basin, being high on three sides, sloping gently to the centre, with a large brook running through it, draining it of superfluous water, and yet supplying it with moisture in summer. The soil is naturally deep, and is made rich by liberal manuring. Everything looked vigorous and healthy, though the crop of fruit, particularly pears, as in most localities, is light.

One plant Capt. Lovett grows to great perfection; this is the rhubarb; we never saw such specimens of the Victoria as we saw here; roots covering with their stalks and leaves ten feet square of ground, and producing stalks weighing three and four pounds each. Such a great growth we supposed could only be produced on trenched ground; and yet he assured us it was only the natural soil, which he admitted was good, that gave it such vigor.

Our visit only made us regret that we had not given the Captain a call before, but should he recover his health, which we hope and trust he may, we shall endeavor to do more justice to a descriptive account of his garden than our hasty visit would allow at this time.

MISCELLANEOUS INTELLIGENCE.

Art. I. *Domestic Notices.*

The Country Gentleman and Prairie Farmer.—It is not our province, even if it were our desire, to notice all the agricultural publications in the country, now numbering, we believe, about *fifty*. When we commenced our magazine there were only *four* of any note, viz.: The *American Farmer*, at Baltimore; the *New England Farmer*, at Boston; the *Cultivator*, at Albany; the *Genesee Farmer*, at Rochester, N. Y.: and we believe our publication, in point of seniority, is at this time the third on the list, the old *New England Farmer* having ceased to exist.

This increase of agricultural publications speaks well for that great interest of our country, agriculture; it shows that our farmers are not mere plodding manipulators of the soil, but that they are reading, thinking, reflecting men, seeking an interchange of thought, and eager to take advantage of the experience of every inquiring mind on the great and important science in which they are engaged.

These remarks are suggested now by having before us the *first* numbers of the third volume of the *Country Gentleman*, a publication growing out of the *Cultivator*, which, wholly devoted to the practice of farming, has no room to give to the horticultural improvements of the day, nor to that kind of intelligence which would please our rapidly increasing rural population, not especially engaged in agriculture or horticulture, but feeling a deep interest in both, and a desire to keep pace with its progress and advancement. It is unnecessary to say the *Cultivator* does supply all these, and furnishes an abundance of the choicest reading on all subjects, suited to the tastes of the plain country farmer, or the country gentleman, as its name indicates.

Another paper which we may also commend to our friends who wish to know what is going on in the great West, is the *Prairie Farmer*, the horticultural department of which is edited by our old friend Dr. Kinnicott, who thus rather roughly introduces us to his readers:—

"HOVEY'S MAGAZINE is our oldest horticultural journal—a paper of great specific merit, which always pleases us—when it happens in our way. If Mr. Hovey could think it worth his while to favor us with an 'exchange,' we might, perhaps, be better enabled to speak by book, and determine whether or not, (as some have hinted,) this old standard work *is*, really, rather ultra—HOVEYIAN."

But no matter, the Doctor is a right generous fellow, and if he has had his ear poisoned by the petty jealousies of those who should be above such things, he will enjoy our favorite monthly all the more, and only regret that nearly twenty years of his life have passed away, without seeing a Journal, whose possession could have given him so much real satisfaction. We cheerfully write down the Doctor's name in our books.

ART. II. *Societies.*

HAMPDEN HORTICULTURAL.

The first exhibition of this new Society took place on Friday, June 16th, at Springfield, Mass. The display of flowers, fruits and vegetables, was highly creditable to the members. We have only room to notice the report of the fruits:—

Among the fruits we saw some of the choicest varieties of strawberries, from Ira B. Sampson; rare specimens of gooseberries, from H. J. Chapin; finely developed cherries of the Black Tartarian variety, from James M. Thompson; Coe's Transparent, do., superior, from James D. Brewer; also fine Black Tartarian, do., from E. McIntyre, Daniel Gay, and others; also beautiful specimens of May Duke and Bigarreau, from Mrs. J. B. Adams; some of the finest specimens of strawberries, Hovey, Willey, and Jenny seedlings, from Daniel Gay, H. J. Chapin, and Mrs. B. C. Knox of Longmeadow; among other choice specimens of strawberries, was a plate of Boston Pine, from Ira B. Sampson; also of the Giant Alpine, from Mrs. E. L. Edwards. In this department of the exhibition there were also other tempting specimens of various fruits, which we are sorry we have not room to enumerate.—(*Springfield Republican.*)

PENNSYLVANIA HORTICULTURAL.

The stated meeting of this Association was held Friday evening, July 18, in the Sansom street Hall, the Museum Building having been recently destroyed by fire. The President in the chair. The display exceeded anticipations for midsummer, where little from conservatories could be expected. There were six large collections of greenhouse plants, among which were many of much beauty and interest. The new plants from Mr. Cope's were objects of attraction, especially so the Nepenthes lævis, a new species of the pitcher plant in bloom. The finely flowering plants from Mr. Fahnestock's were admired; the choice varieties of Mr. Knorr commanded attention; the flourishing specimens of Mr. Buist's were noticed, and the well grown, large plants in Gen. Patterson's and Dr. Rush's merited praise. The fruits comprised delicious grapes from three greenhouses—the Black Hamburgh; White Sweet Water, from Eden Hall; the Black Hamburgh, White Frontignan, from the Insane Asylum, and the White Frontignan, from Mr. Cope's, were specimens seldom surpassed at this season of the year. The peaches from the latter were very handsome; the gooseberries, from Mr. Baxter, were large; a fig, weighing six ounces, was brought by Dr. Rush's gardener. Apricots, pears, raspberries, gooseberries, &c., from various sources, served to complete the exhibition of fruits. Vegetables of the best quality came from A. L. Felten's and Alfred Cope's grounds.

Premiums were awarded as follows:

Collection of 12 plants, for the best, to Thos. Robertson; for the second best, to James Kent; for the third best, to Isaac Collins; and a special premium for a collection, to Robt. Buist. Specimen plant, for the best, to Thomas Robertson; for the second best, to Wm. Sinton, gardener to Dr. Rush. New plants, shown for the first time, a premium of five dollars was awarded to Jerome Graff, for Nepenthes lævis, &c.; and one of a dollar to Meehan & Saunders, for a fine petunia. Basket of cut flowers—For the best, to Jerome Graff; for the second best, to James Kent; of indigenous flowers, to Meehan & Saunders. Bouquets—Pair, for the best, to Jerome Graff; for the second best, to James Kent; and a special premium of two dollars, for seedling hollyhocks, very fine, to Paschall Morris & Co., West Chester. The Committee noticed a fine specimen of Crinum amabile, from Dr. Rush's houses.

By the Fruit Committee—Grapes, black variety, for the best, (Black Hamburgh) to John Riley; for second best (same kind) to A. Smith; white variety, for the best, (the White Frontignan) to John Riley; for the second best, (the White Muscat) to Anthony Smith. Apricots—For the best, to Wm. Johns; for the second best, to A. Parker. Plums—for the best, to Isaac B. Baxter. Figs—For the best, to Jerome Graff. Gooseberries—For the best, to J. B. Baxter; for the second best, to the same. And a special premium of $2 for a dish of peaches, to Jerome Graff.

By the Committee on Vegetables.—Tomatoes—For the best, to Wm Barry; for the second best, to James Jones. For the best display by a market gardener, to A. L. Felten, and for the best display by a private gardener, to Wm. Barry.

The Secretary was ordered to report the amount of loss sustained by the Society, at the late fire at the Chinese Museum.

The subject of holding the Autumnal Exhibition, the place where, and time when, and of providing a hall for stated meetings, were referred to the Committee to superintend Exhibitions.

Six gentlemen were elected members.

Art. III. *Massachusetts Horticultural Society.*

Saturday, May 27th, 1854.—An adjourned meeting of the Society was held to-day,—the President in the chair.

The President made a report in relation to the Society's Hall, and the arrangements desired to be made by Mr. Parker, the owner of the adjoining estate, and a committee of five was appointed to take into consideration the expediency of selling the Society's property. The President, and Messrs. French, Stickney and Wilder, were chosen the committee.

Mr. C. M. Hovey read a letter addressed to the Society, through him, from Dr. T. W. Harris, in reference to a parcel of squash seeds, which accompanied the letter, and which he wished presented to the Society for distribution among the members. Accompanying his letter was another, enclosing $10, from an unknown person, presenting the Society with that amount, to be awarded as premiums for the best specimens of squashes raised from the seeds received from Dr. Harris. A vote of thanks was passed for the donation of seeds, and also to the unknown donor of the liberal sum of $10.

On motion of C. M. Hovey it was voted that the amount of $10 be divided into premiums as follows:—

For the best exhibition of squashes, $5.
For the next best, $3.
For the next best, $2.

It was then voted that the letter of Dr. Harris, with the accompanying votes, be printed for distribution among the members, and the seeds be placed in the hands of the Vegetable Committee, for presentation to all who were desirous of aiding Dr. Harris in his laudable efforts to classify and arrange all the different varieties of this tribe of vegetables, and reduce them to a uniform nomenclature.

Messrs. Wilder, Walker and French were chosen a committee to test the curculio remedy of Mr. Mathews of Ohio.

W. S. King, from the Special Committee, appointed to investigate the doings of the Fruit Committee for 1853, made a report, signed by only two of the Committee, which was accepted.

Adjourned one week, to June 3d.

Opening of the Hall.—On account of the backwardness of the season the opening of the Hall was postponed from the 13th to this day. But owing to the disagreeable weather, and other causes, the show was an entire failure, so complete, indeed, that no charge was made for admission to the Hall. We have never seen a more meagre display of plants, and, with a very few exceptions, the specimens were not considered worthy of the premiums, as will be seen by the Chairman's report.

Cut Flowers: From J. S. Cabot, fine tulips. From J. F. Allen, a fine specimen of Cáttley*a* Mossæ`a, in flower. From J. Breck & Son, cut flowers in variety, including fine tulips. From M. P. Wilder, 54 plants, viz., 16 azaleas, including 6 seedlings, 8 pelargoniums, 15 fuchsias, Gardèn*ia* Fortù*ni*, Rhyncospérnum jasminoides, Balsàmia latifòlia àlba, &c., &c. Plants and flowers, from A. Bowditch, Evers & Bock, J. Nugent, J. A. Kenrick, P. Barnes, Miss Russell, E. M. Richards, Winship & Co., and others.

AWARD OF PREMIUMS AND GRATUITIES.

Greenhouse Plants.—For the best collection, to M. P. Wilder, $15.

Fuchsias.—For the best 6 varieties, to Evers & Bock, $6.
For the second best, to M. P. Wilder, $4.

Pelargoniums.—For the best 6 varieties. None worthy of the 1st premium.
For the second best, to M. P. Wilder, value of the second premium, $6. No competition.

Cut Flowers.—For the best, to J. Nugent, $6.
For the second best, to A. Bowditch, $5.
For the third best, to Winship & Co., $4.
For the fourth best, to J. A. Kenrick, $2.

Pansies.—None worthy of the first premium.
For the best 12 varieties, to Parker Barnes, a gratuity of $3.

Hawthorns.—For the best, to Winship & Co., $3.
For the second best, to J. A. Kenrick, $2.

Azaleas.—For the best, to Winship & Co., $6.
For the second best, to Evers & Bock, $4.
For the third best, to J. A. Kenrick, $3.

Shrubby Pæonies.—For the best, to M. P. Wilder, $5.

Gratuities.—To A. Bowditch, for collection of greenhouse plants, $5.
M. P. Wilder, for a collection of Azaleas, $5.
J. S. Cabot, for fine tulips, $3.
Miss Russell, for basket of flowers, $2.
Mary M. Kenrick, for basket of flowers, $2.
E. M. Richards, for bouquets, $1.
J. F. Allen, for fine plant of cattleya, $3.

James Nugent, for plant of Russellia Juncea, $2.

James Nugent, two plants Erica ventricosa superba, $4.

Winship & Co., Amaryllis croeea, $1.

Evers & Bock, for collection of plants, $5.

June 3d.—An adjourned meeting was held to-day,—the President in the chair.

J. W. Foster, Dorchester, was elected a member. Adjourned two weeks, to June 17th.

Exhibited. FLOWERS: From M. P. Wilder, 100 flowers of Tree pæonies, including various sorts. Cut flowers, &c., from Winship & Co., J. Nugent, E. M. Richards, Evers & Bock, J. A. Kenrick, Miss Russell, Miss Kenrick, &c.

June 19th.—Exhibited. FLOWERS: From Winship & Co., Chionanthus, or White Fringe Tree, Virgilia lutea (magnificent specimen of this beautiful and rare tree,) azaleas, robinias, and other flowering shrubs and trees; Dielytra spectabilis, pæonies, and a great variety of herbaceous plants.

From M. P. Wilder, large specimens of Wiegelia rosea, and Scotch Laburnum, also herbaceous pæonies in great variety.

From William Ashby, a great variety of Double Columbines.

Bouquets and cut flowers, from Miss Russell, Wm. Whiting, E. M. Richards, A. Bowditch, Miss Kenrick, &c.

AWARD OF PREMIUMS.

HERBACEOUS PÆONIES.—For the best 10 varieties, to M. P. Wilder, $5.

For the second best, to A. Bowditch, $4.

June 17th.—An adjourned meeting of the Society was held to-day,—the President in the chair.

There was no business to transact, and the meeting was dissolved.

Exhibited. FLOWERS: From J. C. Cabot, President of the Society, beautiful Chinese Pæonies. From M. P. Wilder, roses, including Hybrid Perpetuals, of very fine varieties; also, a large collection of fine Chinese Pæonies. From J. Breck & Son, fine roses. From Winship & Co., Virgilia Lutea (fine specimen,) roses in great variety, and other cut flowers. From Thomas Page, roses in great variety. From W. E. Carter, fine pæonies. From E. Smith, a unique looking seedling rose. From J. A. Kenrick, Virgilia lutea, roses, pæonies, tulip tree, and fine bloom of Magnolia macrophylla. Cut flowers were also exhibited by J. Nugent, A. Bowditch, Miss Kenrick, Miss Russell, E. M. Richards and others.

AWARD OF PREMIUMS.

ROSES.—For the best 30 varieties of Garden Roses, to M. P. Wilder, $8.

For the second best, to Winship & Co., $6.

For the third and fourth, no competition.

Class 2. For the best 12 distinctive varieties, no competition.

Class 3. Hardy perpetual roses.—For the best 10 varieties, to Azell Bowditch, $5.

For the second best, to M. P. Wilder, $4.

For the third best, to J. Nugent, $3.

HORTICULTURAL OPERATIONS

FOR AUGUST.

FRUIT DEPARTMENT.

The last month has been unusually warm, with several extremely hot days, and although there have been seasonable rains, yet the prevalent fine weather, clear sky and hot sun have been very hard upon vegetation. All the smaller fruits have suffered severely. Gooseberries, currants, and even late cherries were scaled by the hot sun of the 4th and 5th of July; and our whole crop of the former was destroyed from this cause. Fruit trees, however, have grown well, and appear in fine condition, other than that the crop is not large, which is favorable for next year's supply of fruit.

Grape Vines in the early houses should now be pruned, and the house thrown open, both day and night, to fully mature the wood. Vines in the greenhouse will now be ripening off their crop, and should now have an abundance of air, night as well as day, in fine weather. Continue to top the laterals if they get too long, and gradually decrease damping the floors, as the fruit approaches maturity. Vines in cold houses will just begin to color their fruit. Air freely in good weather, but guard against cold easterly weather. Top all laterals, as they get too long. Vines in the open air should now receive attention, as it is the best time to prune them for next year.

Peach Trees in pots will now be at rest, and should receive liberal waterings.

Strawberry Beds should be weeded and cleaned, and kept in order. New beds may be made the last of this month. Prepare the ground early, by deep spading or trenching, that it may have time to settle.

Pear Trees should be still looked after, pinching in all superfluous shoots, and stopping the main ones, if growing too rapidly.

Budding should be commenced now: begin with the plums, then the pears, and lastly the quinces and cherries.

FLOWER DEPARTMENT.

With August commences the season for preparing for winter, and where there is a collection of any extent there is enough to do. Repotting should have been begun last month, and it will yet require some time to complete everything. Propagation of some kinds should be yet continued, and young stock should be forwarded by placing in frames and protecting, as soon as the nights are cooler.

The houses should also be looked over, and be put in order for the winter. Flues, or furnaces, in bad condition, or hot water pipes, or boilers, should be attended to; and if painting needs to be done, this is the time.

Pelargoniums headed down last month will soon need repotting. See our directions in previous volumes. Shake off the old soil, reduce the ball, and place in smaller pots. Cuttings now struck should be potted off.

Camellias, if not repotted last month, should be done now. Cuttings may now be put in, and grafting may be done now. Keep the plants well watered, and repeatedly syringe during the warm weather.

Chrysanthemums should be now shifted into their flowering pots. Top the shoots for the last time. Water occasionally with manure water.

Fuchsias will require a shift for the last time.

Azaleas should be well watered now.

Chinese Primroses should be kept in frames near the glass.

Oxalis Bowiei and **Hirta** should now be repotted.

Ericas, that need it, should now be repotted.

Orange Trees should be repotted.

Verbenas, for winter blooming, should be placed in a frame near the glass. Cut out all flower buds in order to get the plants strong and healthy.

Achimenes, flowering freely, should be well watered. Repot, if necessary.

Japan Lilies, done blooming, will require only a small supply of water.

Roses in pots should be plunged in tan, ashes or sand, and be kept liberally watered.

Amaryllis Belladonna may now be repotted, and water more liberally for bloom.

Cinerarias should have attention, and if they require it the plants should be potted.

Seed of Nemophila, Schizanthus, Scabious, &c., should be planted now for blooming in the greenhouse, in winter.

FLOWER GARDEN AND SHRUBBERY.

During the dry weather of August the flower garden should be carefully looked after, and if any shrubs or plants are suffering they should be well watered. Even the lawn, when small, would preserve a brighter and livelier hue if it had one or two thorough soakings with water. Cut away now all decayed tops of plants, and tie up neatly such flowering specimens as are coming into bloom. Trench and prepare ground intended to be planted the coming month, or later.

Dahlias should now be looked after. See that they are well staked and tied up, as any sudden wind might break and destroy the growth for the season. Prune all that are growing too bushy.

White Lilies may be taken up now, and divided and reset again, or they may remain out of the ground till September.

Carnations and **Picotees** should be layered immediately, so as to get good strong plants before winter.

Pansy Seeds may be sown now for early spring blooming.

Herbaceous Plants, raised from seeds early in the spring, may now be transplanted into the beds where they are to bloom.

THE MAGAZINE

OF

HORTICULTURE.

SEPTEMBER, 1854.

ORIGINAL COMMUNICATIONS.

Art. I. *How to Plant a Good Garden.*

We now conclude our hints on the preparation, laying out, and planting suburban gardens. Presuming that what we have already written has been understood by all who are making new gardens of this description, we proceed to give some further directions in regard to the style of planting, with a list of a few of the more important trees, shrubs, plants and fruits, which should be selected for the purpose.

There are so many different tastes among those who possess or are about to lay out a garden, that it is a difficult task to give such directions as will render them alike applicable to all. One person may delight only in having a collection of fruits, with few or no flowers, shrubs or trees, from the too prevalent idea that the former are of little use, and the latter injurious to the fruits on account of the shade they give and the room they occupy. Another may take pride only in having a choice display of flowering plants and bulbs, such as beds of verbenas, carnations, petunias, &c., and tulips, lilies, hyacinths, and dahlias. A third prefers a good vegetable garden, with plenty of room for salads, tomatoes, egg plants, cucumbers, corn, &c.; while a fourth, and probably a majority of persons, would prefer to combine the tastes of all these individuals, particularly if not too limited for room. It is therefore to such that we shall mainly direct our hints.

First, then, we will suppose the garden we are to plant to be of some particular size and shape,—say one hundred feet wide, and one hundred and fifty deep—an average for town gardens. This, of course, includes both the front and back garden, with the house and its surroundings,—the whole ground within the enclosure. Gardens of the same form, one hundred and fifty feet wide and two to three hundred feet long, would differ but little in the style of arrangement and planting, only requiring more trees and a larger variety. The principal alteration would be in the size of the interior compartments, which would give more space either for grass, shrubs, fruit trees, flowers, or vegetables. Those of smaller extent than the one first named would differ more. In such, few or no large growing trees should be admitted, but few evergreens, and the vegetable department must be principally given up, if a mixed garden.

The Front Garden should be devoted wholly to trees, shrubs, and turf. There are but few cases where an intermixture of flowers or flowering plants would be desirable, or would have a good effect. All the surface after trenching, &c., as we have already advised, and the walks staked out, should be sown down to grass, except a border next the street, and on the two boundary sides, of five or six feet. If the lot is very small, the house near the street, and immediate effect desired, without regard to expense, it may be turfed over; but if planted with good grass seed,—red top, (*Agrostis vulgaris*), or bent grass, (*A. alba*), and white clover,—it will soon form a green carpet. Whether the walk leads from the gate directly in front of the main entrance to the house, or from one side or both, the whole intervening space should be turf. The places should now be staked out for the trees on the borders, marking each stake with the kind of tree, if a particular effect is desired, or it may be left to the gardener to use his own judgment in the matter; but if the proprietor has any desire to indulge his fancy, marking the stake with the kind of tree will prevent any errors, which some gardeners are too prone to make. The border should be planted in an irregular manner, and not too thick, say averaging a distance of six feet, some being less than four, while others are eight feet distant. Taking out the space for a carriage road from the front to the stable in the rear, if there is one, and the space for a walk, there will be about eighty feet of front border to plant, which will take twelve or fifteen trees or shrubs. Three of these should be Norway spruces, two of them arbor vitæs, two Scotch larches, and one Swedish or Irish juniper. The other six may be a Fringe tree, a Tartarian honeysuckle, Deùtz*ia* scàbra, Carragàna arborescens, and a double white and double red hawthorn. If an immediate plantation is desired to shut out the street more effectually, part of them may be duplicated, or additions made; but it must be recollected that they must be cut away when they begin to crowd the others. The Scotch larch is a good tree to plant for rapid growth, to be cut down as soon as it gets too large. The Virginia creeper may be planted to trail over the fence.

The side borders may be planted in the same way, only increasing the variety. Some Mountain ashes may be introduced, for the cheerful appearance of their red berries in the autumn; the red and yellow crab apple, the double flowering apple, double flowering cherry, *P*yrus japónica, Halès*ia* tetráptera, double althæas (two or three kinds), the snowball, the magnolia, Forsythia, Weigelia, *S*piræ̀a prunifòlia pleno, and trilobàta. A few climbing plants may be allowed to run up some of the trees, or trained to neat wire trellises. They may be the Virginia creeper, Celástrus scándens, Clematis, Wistàr*ia* sinénsis, or some of the Prairie roses.

The turf, whether divided by a walk or forming a square or semicircle, may be planted with one or two weeping trees, if a limited space, or three or four of the finest standards may be scattered over it, without destroying its breadth. The best are the weeping Mountain ash, weeping beech, weeping cherry, weeping ash, new weeping willow, weeping sophora, purple beech, tulip tree, &c.

This is all that should be attempted only in gardens of the largest size, where three or four circular beds of different sizes may be cut out of the turf on the side next the house, in which may be planted some of the choicest rhododendrons, azaleas, and kalmias, first preparing the ground by the addition of a little bog earth.

The small piece of ground about the depth of the house, and between it and the boundary on one side, may be laid out in some geometrical form for a flower garden, or it may be turf. If a square, or nearly so, the annexed plan *(fig. 17)* will answer very well, as a more complicated one would cut up the beds too small. It may be planted with annuals, bulbs or roses, or filled with bedding plants in summer, a list of which, adapted to this object, may be selected from that we gave in our July number, (p. 328,) for the Dropmore garden. If, however, such a garden is thought to require too much labor to keep it in good order, the space may be laid down to grass, planting a handsome tree in the centre, or a group of evergreens. In order to give extent to the grounds and shut out the back garden, a privet or an arbor vitæ hedge may be planted just in the rear of the house, from one side to the other, leaving spaces for one or more entrances, as may be necessary according to the shape and situation of the buildings. The front garden will then be complete.

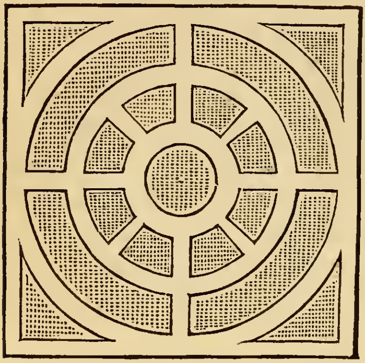

Fig. 17. Geometrical Garden for annuals, bulbs, or roses.

The Back Garden.—Allowing thirty feet for the front garden and fifty for the house and back buildings, there will then remain a back garden of seventy feet in depth by one hundred in width, if there is no carriage road to a stable in the rear—if there is, then a little more than eighty feet. If a road, then the side next the garden may be planted with a row of arbor vitæs or Norway spruces, which will soon shut out the view in this direction. The ground we shall suppose laid out in four squares—that is, a walk within six feet of the boundary, another in the middle, from the front to the back, and one crossing this in the centre. After allowing a six-feet border around each compartment, there will remain four beds about eighteen feet square: these can be devoted to vegetables, laid down to grass, or planted with flowers.

The outside border may be planted with grape vines, selecting the Concord and Diana, the only two fine kinds for a sure crop, to be trained on trellises next the fence, with blackberries, (the Improved High Bush or the Lawton,) which do best where their strong briery shoots can be tied up, or with raspberries. The space in front can be planted with strawberries, or with currants and gooseberries, the latter kept well trimmed so as not to occupy too much space; or it may be filled with choice perennial flowering plants, selected so as to produce blossoms every month from May to November. The six-foot borders will hold about thirty-two trees, planted about eight feet apart, or forty-eight if planted six feet apart, which would answer for pears on the quince, though eight feet is preferable; apple trees grow too large, unless upon the paradise stock. The trees should all be trained as pyramids, (*figs.* 18 and 19) or bushes to keep them within bounds. We should plant thirty-two trees as follows: *Pears.*—These we should set out on each side of the central walk leading to the end of the garden, viz., two Bartlett, two Louise Bonne of Jersey, one Urbaniste, one Duchess of Angouleme, one Rostiezer, one Beurré Diel, one Glout Morceau, one Beurré d'Anjou, one Swan's Orange, and one Seckel,—all on the quince but the two last. *Cherries.*—On one of the other borders, running in the same direction, plant one Black Tartarian, one Downer, one May Bigarreau, one Black Eagle, one Hovey, and one Bigarreau,—all dwarf trees, branching within two feet of the ground. *Plums.*—On the border corresponding with this, six plums, viz., Green Gage, White Gage, Washington, Reine Claude Violet, Bradshaw, and Coe's Golden Drop. On the borders of the cross walks

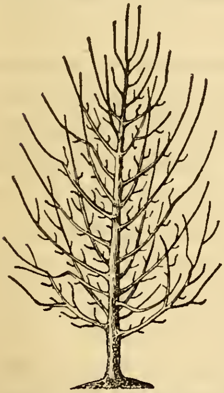
Fig. 18. *Pyramidal Tree. Urbaniste Pear.*

will be room for two *Apples*, (dwarf,) two *Quinces*, and four *Peaches*. All the walks may be edged with box or with turf, though the latter will require a good deal of care to keep it neat and within bounds. Box is the most expensive, but the best for all small gardens.

Fig. 19. *Pyramidal Tree—Buffum Pear.*

The interior beds may be devoted to any purpose the proprietor may wish. If the trees are kept neatly pruned, they will not shade the ground to do any injury, and the whole of it, within four or five feet of the trees, may be cultivated, leaving only a space for getting around without treading upon the border. One of them may be planted with asparagus and rhubarb ; another with strawberries, and the two others for various crops. The whole ground will then be used to the best advantage, and, if well kept, will afford as much gratification as a garden of this size is capable of for general purposes. Thus we have completed the planting of the grounds.

But if we imagine such a residence to belong to an amateur cultivator, who only wishes to gratify a highly cultivated taste for flowers, how very different would be the arrangement,—and, as offering some hints, we briefly recapitulate the mode in which we will suppose it would be planted.

In the place of the border of grape vines, &c., running parallel with the boundary, would be the finest turf, and on the turf, cut out in circles, or forming scroll work, would be beds planted with the rarest kinds of rhododendrons, azaleas, kalmias, ledums, &c. ; a few very choice roses, and single specimens of Magnòl*ia* conspícua and Soulang*iàna*, Weigelia, Forsythia, Deùtz*ia* grácilis, &c. On the trellis would be trained Wistarias, Prairie roses, Virginia creepers, Celastrus, evergreen honeysuckles, &c., not in the straight-jacket style of formal espaliers, which some gardeners are sure to put them, but rambling in a natural manner, without any other care than just to prevent them from running into wild confusion. A few circles would be reserved for plunging out, in summer, such choice plants in bloom as are too tender to stand our winters. A few beautiful vases would be introduced, varying its outline, and giving a finished and artistic appearance to the whole. The four compartments would also be turf, with arabesque figures or circles planted with the finest shrubs and evergreen trees, such as the American holly, the Swedish juniper, *P*inus excélsa, the Siberian arbor vitæ, Tree pæonies, *P*rìnos glàbra, Mahòn*ia* aquifolium, Clèthra alnifòlia, the Purple beech, the Laburnum, *C*ratæ'gus pyracanthifòlia, the purple-leaved berberry, the magnolias, &c. These, harmoniously grouped, would at all seasons, even in winter, afford an ever-pleasing scene, increasing upon acquaintance and nearer inspection of the individual specimens.

The pear is such a delicious fruit that perhaps four or six trees would be introduced in the border at the farther end, planted between arbor vitæs or Norway spruces, the selection being confined to such kinds as are really ornamental from their habit, their beautiful foliage, deep verdure, and, at the same time, fine fruit; such as the Glout Morceau, the Beurré Langelier, the Beurré Diel, and, for its poplar-like head, the Buffum. These are all as truly ornamental as many of the maples, beeches, and other trees and shrubs.

This would be the style preferred by some, and those who admire rich foliage, elegant forms, constant verdure, and artistic grouping, will find a suburban garden of this kind one of never failing delight.

Art. II. *Changes in the Aspect of the Country and its Vegetation on the Coast between Massachusetts and South Carolina.* By Wilson Flagg.

The coast of New England is marked by a general unevenness, with but few mountainous elevations. A great portion of it is *rolling;* the remainder, especially on the borders of the seashore, consists of rocky hills, rising abruptly out of meadows nearly flat. These hills, in many places, are covered with boulders of various sizes, and a growth of timber, of which a great portion may be regarded as mere coppice. The soil is commonly shallow, and abounding in pebbles and gravel. The rocks are generally primitive, and on many parts of the coast, where the hills have been deprived of their wood, they present a disagreeably bald appearance, somewhat redeemed by the green grass, whortleberry bushes and other shrubbery by which they are surrounded. The soil of New England is almost universally covered with grass and herbaceous plants,* abounds in excellent pasturage, and is clothed in verdure during the greater part of the year. The country is well supplied in rivers, lakes and watercourses, which are perfectly clear and transparent,—the more sluggish streams, that flow through the peat meadows, often tinged with a light claret.

Among the different species of trees which are conspicuous as ornaments to the streets and enclosures, and indigenous in the woods, the American elm takes the first rank. It is peculiarly the tree of a northern climate, and its beauty and magnificent proportions account for the universal favor it has received. In cities and old towns an occasional English elm may be seen, which, though possessed of more of the sturdiness of the oak, is not so lofty or so graceful as its American congener. The latter combines more of those qualities that render a tree valuable both for shade and for ornament than any other known species. Nearly all the plains, valleys and roadsides, in the New England states, are marked by these solitary elms, that tower above every other tree, and form the distinguishing ornament of this part of the country.

Conspicuous among the elms, rivalling them in height and exceeding them in bulk, yet bearing no comparison with them in any quality of beauty, are the dying sycamores, or Occidental planes. At present, these trees add no beauty to the landscape, and will eventually perish or be cut down. They are not indigenous in this region. I mention them in order to notice the change in their appearance beyond a certain boundary. The fatality that seems to await them is evidently confined to those in the region north of the Potomac. I can sympathise with the general regret which is felt on account of their decay; but it is a subject of deeper regret that this comparatively inferior tree, remarkable for no good quality, except its great size and rapidity of growth, should have been allowed to usurp the place of the different oaks, which, had they been planted originally in the place of the sycamores, would have caused our streets and enclosures, at the present time, to rival even Old England in the magnificence and beauty of their shade trees. Nature is now destroying it as an usurper of the soil that rightfully belonged to the more noble family of oaks.

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* The present notes are the result of observations made on a railroad journey to the South, during the month of June last, and relate chiefly to general appearances in the face of the country. The writer does not profess to define the exact geographical limits of certain trees and plants.

It is a lamentable fact that the oak is rare as a shade tree or as a standard in Massachusetts. There is not one of large size on the Boston Common. Perhaps their habit of spreading their branches horizontally—an inconvenience in narrow streets and avenues—may have formerly prevented the planting of them on the borders of our streets; but as standards they have been equally neglected. Vast numbers of them have been cut down, after having attained their full growth, to be used for ship-building and other manufacturing purposes. The town of Essex, which is noted for ship-building, was, less than twenty years ago, adorned with many standard oaks, some of which were five feet in diameter. When the carpenters had cleared the forests, they could not resist the temptation to lay violent hands on these noble standards; and they fell, the victims to a spirit of industry and enterprise, which was not sufficiently guided by the light of a benevolent regard to the public interest. The oaks, however, notwithstanding the diligence which for a century past has been used in felling them for ship-timber, are still prominent objects in New England forest scenery. Oaks of a middle size, the second or third growth since the original clearing of the forest, are abundant, and occasionally we see a full grown standard on the plain or the hillside.

The maples have suffered less from this spirit of modern vandalism, and at the present time are the trees which are most generally planted at the north. The trees of this genus, excepting the silver maple, are the brightest ornaments of the forest in early autumn. The silver maple is destitute of these beautiful autumnal tints, and has less depth of verdure than most of the indigenous species. The maples are sufficiently numerous in the woods, streets and enclosures of New England to form one of the characteristic features of the landscape. But the early part of May, when they are in blossom, and the early part of October, when they display their autumnal hues, are the only periods of the year when they would attract particular attention. At other times, they have no quality, like the elm and the oak, sufficiently remarkable to render them conspicuous objects in the landscape.

Among the foreign trees, the horsechestnut, the European lime and larch, and the silver poplar are sufficiently common to give character to the more cultivated parts of the landscape in Massachusetts. The only tree that seems to thrive equally well and to be equally common in all parts of the United States, is the weeping willow,—a tree that never, in any situation, seems to be out of place. As it is only within a few years past that public attention has been given to the coniferous evergreens, not many full grown trees of this natural order are seen in the enclosures and ornamental grounds. The country seats in the vicinity of Boston are commonly encircled with a belt of white pines, which are so thickly set that a perfect tree is not so likely to be found there as in the first native pine woods in the vicinity. The white pine is a very comely tree on the edges of the northern woods, where it has had space to grow and develop its branches; and the trees of this species, when grouped with oaks, beeches and maples, form the most beautiful wood-scenery of the north. Some of the most nearly perfect in form, though not the largest trees of this species, are seen in the hills that gird the northern shore between Beverly and Gloucester. Fortunately for the preservation of these fine trees from the woodman's axe, the woods along this romantic shore have been very generally purchased by gentlemen of wealth and taste, for country seats.

One of the fairest ornaments of the northern woods, and perhaps the most graceful tree in existence, is the hemlock. Trees of this species are common in most of those lands which are productive of the white pine, and are indicative of a fertile soil. But certain difficulties attending their successful growth, when transplanted from the woods, have prevented the general cultivation of these trees. Hence one is seldom seen, except in its native forest. The same difficulties have attended the cultivation of the black spruce. In the place of these trees, the Norway spruce and balsam fir are common, though very few of them are twenty years old.

A prominent feature in some of the barren parts of the coast scenery of Massachusetts, is a dwarfish growth of red cedar, or juniper. These trees in this part of the country seldom exceed fifteen feet in height. Farther south, the juniper is more lofty in its stature, and more luxuriant and brighter in its foliage. In the New England states it cannot be regarded as an ornament to the landscape, where, in connection with the yellow pine and the white birch, it marks the most sterile portions of the soil. The white cedar or northern cypress, resembling the juniper in its general aspect and mode of growth, is a large tree, and clothes the swamps in many places with a deep sombre verdure. It indicates a wet boggy soil, which is only with the greatest difficulty reduced to tillage. The trees that serve more than any others to characterize the landscape of New England, are the elm, the different species of maple, the beech, several species of birch, the white pine and hemlock. The chestnut is sufficiently frequent along almost the whole extent of the Atlantic coast, to constitute, like the oaks, a general feature, common to each region.

Proceeding southward from Boston, the first point where a decided change is perceived in the character of vegetation is in the region south of the line of Long Island Sound. The elm has now become comparatively rare, but we observe a larger proportion of standard oaks than in Massachusetts. The only common species of maple which is cultivated as a shade tree in this region is the silver maple, which in most valuable points is inferior to the other species. The Lombardy poplar, that old favorite for avenues, once so common and now so rare at the north, is here more frequent and more thrifty in its growth. In the forests the tulip tree is already a prominent object, in connection with the sweet gum and a species of willow-leaved oak. The short-leaved Jersey pine is abundant, intermingled with the common yellow pine. These trees mark the whole tract of country on the coast from Philadelphia to the southern line of Virginia. In this part of the country, the locusts and the junipers, which are mere dwarfs and pollards in the New England states, attain their full size and beauty. Few evergreens exceed in elegance of form and foliage the junipers of Maryland and New Jersey.

The face of the country in this middle region is considerably varied. There are more level tracts than in New England, but the other parts resemble the latter in general aspect. The traveller has quitted the granite formation, and has entered that of the red sandstone, which prevails more or less throughout the Middle States. The soil is sandy, and of a deep yellow hue. The growth of grass and herbaceous plants is perceptibly thinner, and the pastures comparatively of less value than in the Eastern States. The clearness of the streams and other collections of water is apparent no longer. All the rivers, lakes and water courses south of Philadelphia are turbid and yellow. This turbidness of the waters is evidently caused by the deficiency of grasses and small herbs that form a carpet of verdure for the surface of the earth in the more northern latitudes. The tributaries, in a country where the pasturage is scanty, passing over a larger proportion of bare ground, carry down with them a proportionally larger quantity of the soil to the rivers and lakes into which they flow. This phenomenon is erroneously attributed to the color of the soil. It will be found universal in all parts of the country south of the grazing regions, and forms a feature that greatly injures the picturesque effects of southern rural scenery.

As the Eastern States and those in the same latitude are the grazing and cereal region, the Middle States are the region of maize and tobacco. Wheat already finds a less propitious climate than that of the next degrees of latitude above them. Apples and pears, though still abundant, are inferior in some important respects to those of a more northerly country. But the peach and the grape are cultivated here to their greatest perfection, and the fig may be ripened with very little difficulty. The sweet gum, the tulip tree and the persimmon mark the agricultural boundaries of the tobacco and maize region, as the large magnolia and the cypress mark the region of rice and cotton. The sweet gum, (*Liquidambar styraciflua*,) which is one of the most common trees south of New York, is remarkable for its great size and height, for its elegant palmate leaves, and its pure and glittering verdure. It is a curious fact that it is never used as a shade tree. This neglect has probably arisen from the universal propensity to undervalue whatever is common.

In New York city we first notice the ailanthus in the streets and enclosures. The trees of this species, when only half grown, resemble the common large sumach so closely that they might easily be mistaken for it. Their foliage, which is of a dull green, is not sufficiently dense to form a deep shade, and their greenish blossoms, borne in a loose panicle, emit a very offensive odor, perceptible all around within a circle of a hundred yards from any tree. The principal recommendations of the ailanthus are the rapidity of its growth and its exemption from the ravages of insects. The offensive odor of the ailanthus is a quality attached to certain vegetable species, to indicate that they are to be avoided by man as well as by vermin. Why it should have entered into the head of any rational being to import this nuisance from our antipodes, and thus bring nature into disrepute, is a problem difficult to solve. These trees prevail more extensively than any other species in the enclosures and by the roadsides in New York, Philadelphia, Baltimore and Washington, and occupy the space that might otherwise be filled by a more beautiful and useful species, not under the curse of nature, from our indigenous forest.

The locust attains in this middle latitude a larger size and more perfect form than in the Eastern States. Many beautiful standard locusts are seen in most of the villages in the Middle and Southern States, and are sufficiently numerous to form one of the characteristic features of southern landscape. The locust at the north is late in putting out its foliage, and is not tinted in autumn before it sheds its leaves. But the beauty of its foliage, the depth of its verdure, the fragrance of its blossoms, and its entire freedom from a single quality that is disagreeable to the senses, have rendered this tree, north and south, a universal favorite. A fact worthy of notice in connection with a locust grove, is that the grass under its protection is remarkable for its luxuriance, and is particularly grateful to the cattle and flocks.

Washington and its vicinity seem to be the limit below which the plane trees are unaffected by the disease that has nearly destroyed them at the north. South of this point they become more and more frequent and vigorous, until we find them the most common of all indigenous shade trees. This fact would seem to indicate that the Occidental plane has some habit that renders it ill adapted to a northern climate. It is sufficiently hardy to endure the severity of the winter, but has a propensity to put out its leaves at too early a period in the spring. The injury suffered by the planes may perhaps be attributed to this circumstance, and the consequent blight of the first tender growth. This continued destruction of the first growth of the leaves, like the annual consumption of the leaves by caterpillars, must eventually destroy the life of the trees. In Virginia are many very large sycamores, apparently in perfect health, and according to the testimony of the inhabitants, they have never suffered that blight which has nearly destroyed them in all the country north of the city of Washington.

Below Virginia another marked difference is seen in the aspect of the country and its vegetation. The face of the country in this region, for several hundred miles, is extremely level. The soil, for the most part, is composed of a mixture of peat and white sand, with a small portion of clay. The growth of grasses is very scanty. Indeed this tribe of plants may be considered almost extinct, except in the mountainous portions of this latitude. There is no pasture land. A few species of sedge, and two or three annual grasses, that form no turf, constitute the whole grazing crop. But the meadows already present to view a brighter constellation of flowers, as if in compensation for the lack of verdure. In this southern region the flowers are more uniformly scattered, while at the north they are more generally arranged in groups. The phlox, the rhexia and the cassia may be considered types of southern flowers; the violet, the anemone and the Star of Bethlehem types of northern flowers. The herbaceous plants of the south are generally half woody, and have more and more of a woody texture as they grow nearer the equator.

Cotton plantations are frequently seen after passing into North Carolina. In about the same latitude we find the trees tufted with the mistletoe; we see the cane in the bogs, and in the woods the large magnolia and southern cypress. Wheat fields are rare; but the plains are occasionally, near the rivers, diversified by the bright verdure of the rice plantations. The mistletoe is more frequently attached to the sweet gum than to any other tree, though the pine is the only tree that is entirely exempt from it. It is not very conspicuous when the trees are in full foliage, but forms in winter one of the distinguishing marks of southern wood-scenery.

At this point commences that immense flat region of country, denominated the "pine barrens," covered with tall trees, chiefly of two species of pine,—the yellow pine, (*Pìnus variábilis,*) and the long-leaved pitch pine, (P. *palústris.*) From the last is procured the tar and turpentine that constitute the principal export from this part of the country. These tall trees form the greater part of the timber of this region, and render it gloomy in a remarkable degree. This effect is produced partly by the blackness of their trunks, and is increased by their irregularly formed heads of dark green sombre foliage. In low grounds and near the rivers the cypress abounds; and the aspect of the woods is rendered still more sombre by the festoons of long gray lichens, that hang like funereal drapery from the branches of the trees. These lichens, which are always abundant in low pestilential swamps, have been not inaptly denominated the "garlands of death," as significant of the fevers that prevail in their localities. The cypress is the tree that is most abundantly draped with this lichen. The cypress is deciduous like the larch, less pyramidal in its form, and not so dense in its foliage, which is more beautiful on examination than in its effect on a distant view. It is not cultivated at the south as a shade tree, probably for the reason that it thrives only in wet grounds.

These gloomy and almost interminable barrens are sometimes pleasantly relieved to the eye of the traveller by the occurrence of one of those green savannas, so often mentioned by travellers. The savanna is not a prairie. It is a level tract of land, often approaching the circular in its shape, averaging about one or two feet lower than the level land about it. It is supposed to be the basin of a former lake or collection of water, which has been filled up by the accumulation of soil and vegetable matters. The savanna is perfectly level, clothed in perpetual verdure,—except in winter, when it is covered with water,—and abounds in a great variety of flowers. The prairie differs not from other land, except in the absence of timber, which is supposed to have been destroyed, in a former era, by fires or by the aboriginal inhabitants.

Among the shade trees of this part of the country, the most common of the exotics are the Otaheitan mulberry, that bears a general resemblance to the catalpa, and the pride of China, Lagerstræmia indica. The last is a middle-sized, but finely-shaped tree, seldom attaining more than twenty feet in height, and spreading out in a nearly perfect hemispherical head. It is clothed with an elegant, dark green foliage, each leaf being twice pinnate, resembling that of the locust at a little distance, and forming an almost impenetrable shade. But the most beautiful and most valuable shade tree, in this part of the country, is an evergreen oak. The foliage of this tree (of which there are several species) resembles, on a distant view, that of the willow, but the leaves are not pointed. The evergreen oak has more elegance of shape and less sturdiness than the common species of oak. It has the same habit of sending out its branches in a horizontal direction; but these branches are more numerous and proportionally smaller. Its smaller foliage would cause the tree to appear almost naked, were not the branches smaller and more numerous, in order to accommodate a greater number of leaves. Still, this oak, compared with other trees, has more or less of that expression of strength which is characteristic of the whole genus; and its branches are so uniformly developed, that its head is often rounded into an almost perfect sphere.

Comparing the north and the south, we shall find the northern latitude distinguished by its almost uniform aspect of green grasses and other herbaceous plants, its clear crystal streams and lakes, and its luxuriant pasturage. The southern region is remarkable for its large trees, its greater proportion of evergreens, and the superior beauty and luxuriance of its vines, and half shrubby plants bearing flowers of greater size and splendor. Nature has clothed the fields in this region with an endless variety of beautiful vines, greatly exceeding those of the north. The Bignonia climbs the trunks of the lofty pines, from fifty to a hundred feet from the ground, completely encompassing them with flowers of rare beauty, and foliage of the finest verdure. The climbing fern, *(Lygodium palmatum)* surpassing the ivy in elegance of foliage, covers many a tall tree with its bright green palmate leaves; and many species of grape vine, the Virginia creeper, the sumach, and several papilionaceous runners, combine to decorate the whole forest with a luxuriant and flowering drapery.

In comparison with the north, the southern forest exhibits a greater exuberance, and trees of larger size. There is more in New England of what is technically termed coppice, consisting of a second or third growth of trees. The south has the magnolia and the tulip tree, but a southern pine forest has but few of those qualities that render a white pine grove so attractive in the New England States. Yet it is chiefly the herbage that gives the north a verdurous aspect in comparison with the arid fields of the south. Nature opposes the green pastoral hills and meadows of the northern regions by the evergreen trees and shrubs and luxuriant vinery of regions nearer the equator; and while she has spread the principal beauties of vegetation at the feet of the northern husbandman, she bids him of the south look upwards for the principal floral charms of his own latitude.

Nature, however, does not bury the earth for a quarter of the year in snow, without returning to the inhabitants a beneficent compensation. The beautiful passion flower that springs up on the surface of the dry sands, can never, by its beauty, make amends for the absence of green meadows, sprinkled with violets and anemones. Nature, as a recompense for the severity and privations of winter, has placed the garden of the world in the northern temperate zone. Travellers and poets may unite in celebrating the orange and myrtle groves of the south, but the northern husbandman who, in the early spring, watches for the reappearance of vegetation from underneath the snows, is preparing to enjoy a luxury of green fields and sweet-scented meadows at a season when the inhabitant of the south looks impatiently for the coming of December.

Beverly, August, 1854.

ART. III. *On the Cultivation of Pear Trees in the Neighborhood of London.* By J. DE JONGHE, of Brussels. With Notes by Dr. LINDLEY, and Remarks by the EDITOR.

IN the *Gardeners' Chronicle* for July 29 appeared an article by M. Jonghe, of Brussels, on the cultivation of pear trees in the neighborhood of London. His remarks struck us as so peculiar, and withal so unsound, that we at once selected them for our pages for the consideration of our own cultivators, believing the same causes operate here as in the climate of England; and we were just penning our own notes upon the same, when another mail placed in our hands the criticism of Dr. Lindley upon M. Jonghe's paper. We now present them together, and beg the attention of our amateur and practical pear growers to both, as well as to our notes which follow. We think they will show that neither M. Jonghe nor Dr. Lindley yet understand the true causes which lead to the failure of the cultivation of the pear in England:—

It is evident to every foreign observer that the plantations of pear trees in the neighborhood of London are objects of great importance. They remark that extensive portions of ground are planted with these fruit trees, especially between Vauxhall station and Kingston, from thence to Isleworth, between Hammersmith and Brentford, and in going from Paddington to Reading. In all these plantations, the same system prevails as regards the choice of trees; and they all appear to be reared and cultivated uniformly in the same way. The trees, however, grow vigorously, which is a proof that the soil and climate are suitable to them.

Doubtless the soil in these localities, as well as the climate of England, is generally colder than in Belgium, which, also, is less favorably circumstanced in these respects than its neighboring countries situated more to the south. On this account the planter should select only very hardy and vigorous sorts, which should be reared in a proper manner; and in order to obtain the desired result, the trees, moreover, should be skilfully pruned.

On several visits which we have made of late years to the plantations of pear trees above alluded to, we have observed that they were unproductive; and to what cause must this be attributed? This question is not only of great importance to the proprietor of the soil, but also to the tenant. We shall endeavor to solve it.

It is probable that in the choice of seeds for raising pear stocks the preference is given, in England, to those from vigorous varieties. In proof of this, the trees generally exhibit a strong growth. Instead of training the stocks with a straight upright stem for eight or ten years before grafting, at seven feet from the ground, that is to say, at the part of the stock nearest to the fructification, the English cultivator grafts near the ground, and as far as possible from where the fruit is to be produced. The consequence is, that the graft requires to grow for three or four years before it attains the necessary height of stem for a standard; and then another period of three or four years must elapse before a head can be formed to produce its first fruit. This is an error, and is contrary to all physiological principles applicable to the cultivation of fruit trees.

In fact, when we examine the bearing of pear trees, trained with an upright stem, either as a pyramid or as a standard, we always find that the fruit shows itself first on the upper part of the plant. The age of the tree, the numerous sap-vessels of the stem and branches exposed to the influence of the solar rays and free air, contribute to the formation of fruit-buds, and to the nourishment of the fruits which are subsequently produced. When we deprive the stock of these sap channels, in consequence of grafting low, or on stocks that are too young, we have long to wait before the trees come into bearing. This will be understood by every practical man who has paid attention to the subject.

There is another point to which attention ought to be directed. Some stocks exercise a certain influence on the graft; and the latter requires likewise to be judiciously selected. In grafting at standard height, it is necessary that the graft should be taken from a vigorous shoot in the upper part of a bearing tree, growing on the pear stock. By using a graft taken from an overgrown shoot, or cut from a lateral branch of a tree not yet in bearing, fruitfulness is thereby delayed. If we employ grafts taken from a very old tree, diseased or weakened by bearing, or from a tree worked on the quince stock, we impart to the tree resulting from such grafts all the characteristics of degeneracy and of premature decrepitude.

In all the plantations around London, the standard pear trees, instead of being trained with a straight, upright stem, exhibit, after seven or eight years of cultivation, a number of branches hanging and straggling in all directions, furnished with a mass of spurs disproportionate to the vigor of the trees. These flower abundantly every spring, but the fruits, from being slightly or imperfectly set, drop off. These disastrous results are attributed, in England, to the coldness of the soil and variableness of the climate; but we are of opinion that the fault is entirely owing to the mode of cultivation. Some call this English cultivation; but when it only gives unsatisfactory results, why persevere in it?

We have stated on what principles a tree ought to be reared; but in order that it may preserve sufficient vigor, and that it may be quickly brought into a bearing state, it is necessary that the roots, stem, branches, and shoots should be in due proportion to each other. To maintain the equilibrium amongst these, it is necessary that the tree should be subjected, from its youth until it comes into bearing, to a proper system of pruning. Afterwards its top will require to have the branches thinned, regulated, or occasionally shortened; and this care must be continued during the life of the tree. By keeping the spurs in good condition, and the tree clear from insects, it will be enabled to set and bring to maturity its fruit. It is scarcely necessary to add that this result cannot be obtained unless the ground is enriched with good manure, adapted to the nature of the soil. This holds good as regards all crops. There is another essential point to which we would call the attention of intelligent practical men.

In rearing a standard for the open ground, it is indispensably necessary to train the stem erect, straight, and tapering, so that all the sap ascending and descending by the stem may be distributed in the branches and shoots, placed at proper distances and at angles sufficiently open to admit the sun's rays to all the parts. It is also necessary that the stem be grafted from six to seven feet above the ground, and that it is strong enough to support itself without a stake. We only place a small rod at the upper part, which is tied to the stem in two places; to this the graft is fastened for two consecutive years, in order to preserve it from being injured by the wind. During the summer of the third year after grafting, the leading shoot is still kept straight and upright by means of a small rod.

Disbudding must be attended to during the first three years after grafting, in order that the branches may be formed at proper distances. The operation should be commenced as soon as the grafts begin to push. Laterals should be pinched after midsummer. If these operations are duly performed, the winter pruning will be reduced to merely cutting back the shoots to a good eye. The tree will bear fruit in the third or fourth year, if grafted and reared according to the system we have indicated, and of trees managed according to it we could show a great number of specimens in our nurseries at Brussels.

We are of opinion that these operations belong to nurserymen; for those who have to make plantations of pear trees will find it better to plant trees already formed as standards, and that have been grafted at least two years. If the trees be planted in November, the check from removal will tend to the formation of fruit buds in the following season.

There are some new and very hardy varieties of pears which have been raised from seed in Belgium within the last 25 years, and which are admirably adapted for standards. They will be specially noticed in an article which we are preparing. If any English amateur should rear a certain number of standard pear trees, according to the preceding directions, and manage them on good principles, he may be assured they will bear abundantly; and then he will readily perceive the cause of unfruitfulness in the pear plantations in the neighborhood of London.—*J. de Jonghe, Brussels, July* 19.

Our correspondent, M. de Jonghe, has raised a very important question; nothing less than the cause of the present UNPRODUCTIVENESS OF PEAR TREES. In a communication printed in our last number, he maintains that the constantly recurring loss of our orchard fruit is owing, not as is alleged in England to spring frosts, but to our own mismanagement. As M. de Jonghe possesses great experience in a climate pretty much like our own, and is in the best sense of the word a practical man, his opinions deserve the utmost respect. Let us see, then, to what points his criticism is directed.

His objections to our management fall under the following heads:

1. Our pear trees are not grafted standard high.
2. Stocks are badly selected.
3. Scions are badly selected.
4. The trees are overloaded with spurs.
5. We prune ill.
6. We neglect cleanliness in our trees.

Half a dozen charges like these are sufficient to shake the nerves of the stoutest gardener, when put on his defence. Let us see what answer can be made to them.

Orchard Pear Trees should be grafted standard high.—M. de Jonghe offers some explanations of this practical truth; but we are not inclined to acquiesce wholly in the reasoning. That the period of bearing is accelerated if a scion is put upon a stem six or seven feet high, and three or four years old, instead of being compelled to form its own stem, must be admitted. A certain length of time is required to enable a tree to arrive at a bearing state; and if that time is passed in the nursery rather than in the orchard so many years' rent is saved. But then a nurseryman pays rent as well as a market gardener, and if he is to keep his trees three or four years longer than usual before he sells them, he must be remunerated by a higher price. No doubt a pear-stock seven years old will bear quicker when grafted than a stock three years old, and so on. Of organisable matter ready to be formed into fruit there is much more present in an old stock than a young one. We should say that if immediate bearing is required then M. de Jonghe is right, and in private gardens his views cannot but be accepted, when price is no object; but in market gardens it is questionable whether it is more profitable to pay rent for unprofitable land to the landlord or the nurseryman. One or the other must have it.

As to a bad selection of stocks our correspondent does not insist upon that; he merely suggests it. We believe that little or no objection can be taken to our English pear stocks. Good, strong, hardy kinds, with a sound constitution, are certainly to be preferred, and M. de Jonghe does not deny that they are so selected. In one respect grafting standard high secures the buyer from bad stocks; for weak unhealthy varieties will not form, soon enough for commercial purposes, strong healthy stems, such as pear trees grafted seven feet high must necessarily have.

That scions are unskilfully selected is no doubt quite true in many cases. An English gardener is satisfied with his scion if it is from nice clean young wood, and he does not inquire whether it is from a lateral or a stout upright shoot, from a tree grafted on a pear or a quince, from a good bearer or a bad one. But M. de Jonghe's practice tells him that the scion should be carefully selected "from a vigorous shoot in the upper part of a bearing tree," and from no other place. He finds that such scions bear sooner and produce better heads. Upon this we have no remark to make; but we should like to know what the experienced orchardists of this country say to it. Since it is there that vitality is strongest, and that light and free air exercise their greatest influence, it is probable that his remark is just. But whatever opinion may be formed as to that point, no doubt can exist as to the impropriety of taking cuttings from trees weakened by old age, or bad stocks, or bad soils, or bad climates, or any other cause whatever. All experience shows that in every kind of created thing, be it man, or beast, or bird, the mysterious principle called life remains during the whole period of existence what it was at first. If vitality is feeble in the beginning so it remains. Weak parents produce weak children, and their children's children are weaker still, as imperial dynasties have sadly shown. When the rustic schoolboy translated the well-known Latin adage into "strong uns come from strong and good uns," he expressed in homely words a universal truth; and we have no doubt that M. de Jonghe is perfectly right in applying the principle to the pear tree. It was, indeed, the notoriousness of the fact that old decrepid trees produce sickly successors, themselves to become decrepid prematurely, which Mr. Andrew Knight misinterpreted into the limited duration of varieties, and which led his followers into wasting breath and paper upon endless applications of the misconception to the potato disease. Undoubtedly the greatest care should be taken to insure scions being procured from perfectly healthy trees with unimpaired vitality.

That our trees are overloaded with spurs is a very just remark. In fact, orchardists never dream of removing them. The more they have, the greater they fancy the chance of a good crop. They are like those speculators who, in their eagerness for immense gains, contrive to realize nothing. The Belgian, on the contrary, is the plodding, thrifty shopkeeper who takes care of his moderate profits, never makes much, never loses much, but in the long run finds a very satisfactory account at his banker's. It is an axiom in applied physiology that no animal or plant can bear more than its system can nourish; when an attempt is made to contravene this natural law, abortion is the result; or the produce, whether animal or vegetable, if it survives, is degenerate and imperfect. Let a pear tree contain a pound of nutrition or natural food, ready to be attracted into its spurs; let each spur require a dram of such food, then the tree may carry 256 spurs, supposing the food to be equally distributed. But if a thousand such spurs are present it is probable, not that 750 will be starved and 250 fed, but that the whole will be starved; in the struggle among them for the food, none will obtain what is requisite to sustain life, and all will perish. M. de Jonghe carries the application of the principle far beyond what is usual. He says that food and vitality may be practically regarded as identical, the one representing, or at all events accompanying, the other. If so, the action of frost becomes intelligible. Under favorable circumstances, that is to say when well fed, the blossom of the pear tree can support without injury, we will say, 10° of frost. In that case the thermometer falls to 22°, and no harm is done. But when ill fed, vitality is so low, and has such small power of resisting cold, that even less than 10° of frost are fatal; in such a state of health, if the thermometer only falls to 24°, every blossom perishes. That is our experienced correspondent's case. We have put it into a form which he, perhaps, may not have contemplated; but it represents exactly what we understand to be his opinion, and a very striking view of the action of frost it is. What is more, it is probably true, either wholly or in a great measure. We are assured that frosts which leave nothing behind them in England pass over the well-managed Belgian orchards without committing serious mischief. We have M. de Jonghe's testimony to this fact in a former communication. He then stated that the great frost of April 24th, which ruined all the orchard crops in the south of England, had spared many of the Belgian hardier pears, cherries, plums, and even apricots. Our hardiest pears, cherries, plums, and apricots perished. Of course it is a question whether our hardiest fruits are as hardy as the Belgian. We entertain no doubt of their being so. This opens up a very interesting field of inquiry, which we cannot pursue to-day. On an early occasion we shall return to the subject, and then consider our correspondent's two remaining criticisms, viz., bad pruning and want of cleanliness.—*Ed. Gard. Chron.*

We now propose to examine some of the main points in M. de Jonghe's paper, which strike us as entirely erroneous, or, at least, as wholly unimportant in the successful growth of the pear.

1. Should pear trees be grafted standard high?
2. Should scions always be taken from the leading shoots of bearing trees?
3. Will a mass of spurs, disproportioned to the vigor of the trees, prevent the setting of the fruit?
4. Is the English mode of cultivation all wrong?

1. Should Pear trees be grafted standard high? Dr. Lindley has fully expressed our views on this head: He says, "We are not inclined to acquiesce wholly in the reasoning:" we certainly are not. We are well satisfied, after an experience of twenty years in raising at least 300,000 pear trees, that

grafting small stocks is not "contrary to all physiological principles," and that, practically, it is all the same whether a tree is grafted high or low. Suppose nurserymen should grow their stocks "with a straight stem for eight or ten years" before grafting, or should graft them low, and the purchaser should grow them five or seven of these years: who would be the gainer? Nobody, unless the purchaser, for he can grow the trees cheaper than the nurseryman, and far better, for he can give them room, which the nurseryman cannot, unless he occupies a thousand acres; for, to grow 100,000 pear trees, or even 50,000, which is only a moderate stock, with other trees, eight or ten years before grafting, and three or four afterwards, in such a manner as to give each due space, would be literally impossible in any ordinary nursery grounds. In truth, practically speaking, M. de Jonghe's idea is all moonshine. Physiologically considered, we think but little more of it. We have not tried experiments enough with standard grafting to say it is not as good as low grafting; but enough, we think, to say it is no better. Everybody knows that moving a pear tree eight or ten years old, which in our climate would be fifteen feet high, gives it such a check that it is not fit to graft for two years, and then it can never be made so handsome as one grafted low, with the head symmetrically formed, as it proceeds in height. Pear trees in our grounds, twelve years from the seed, and eight years grafted, are four inches in diameter. Indeed, so far as having "long to wait before the trees come into bearing," by grafting low, it is the quickest mode of procuring fruit in the end. So far as *immediate* bearing is concerned, no doubt a tree ten years old will produce fruit quicker than one three years old; but this is supposing the tree to be growing where it is grafted, and not to be removed afterwards, for any nurseryman will supply trees eight years old, in full bearing, unless some such sorts as the Dix, &c. And here let us ask M. de Jonghe how he accounts, on "physiological principles," for the fact that trees twenty years old, which have been grafted with the Dix, have not produced fruit in seventeen years more, (see our Vol. XVII, p. 485,) while we have dwarf pyramidal trees of this sort, on the pear, grafted low, and only eight years old, producing fruit? This does not appear as if grafting standard high was always the most speedy mode of getting fruit. It is a well understood principle with intelligent cultivators, that trees will not produce abundantly until they arrive at a certain age; but it is, we imagine, of little consequence whether the tree is a wild stock a larger portion of this time or not. The organizable matter stored up is all the same in either case.

2. SHOULD SCIONS ALWAYS BE TAKEN FROM THE LEADING SHOOTS OF BEARING TREES? "It is necessary," says M. de Jonghe, "that the graft should be taken from a vigorous shoot on the upper part of a bearing tree growing on the pear stock," and on this head Dr. Lindley has "no remark to make," because he has only theory and no practice. Now we do not believe this dictum of M. de Jonghe's, any more than we believe his grafting high on physiological principles. We will instance one case out of thousands in our own practice, to show that there is no necessity of doing any such thing. A few years ago we received a lot of grafts of a new pear which were cut from two old bearing trees, and included all the new wood fit for scions upon them. These we grafted into young stocks four or five years old in the spring of 1847; they grew vigorously, and in the autumn of the same year we headed down the young tops of nearly all these grafts, and budded them into young stocks. They all grew, and began to bear in 1850; in 1853 we gathered two barrels of pears from a lot of these trees, and now some of them are twelve feet high, and full of fruit, and still standing in the nursery row. So far as long experience and careful observation may be considered of any value, we have been unable to detect any difference in the vigor or bearing of trees budded with scions taken from leading or side shoots on old trees or young trees, provided they were in a healthy condition, either on the pear or quince.

Dr. Lindley has stated in his *Principles of Horticulture*, that the buds of a tree "are all exactly like each other; they have the same constitution, the same organic structure, and the individuals they are capable of producing are consequently all identically the same." Yet he now says, he has "no remark to make on this part of M. Jonghe's paper, but "would like to know what experienced orchardists say to it." He is, however, willing to admit the truth of the rustic school boy's translation, that "strong uns come from strong and good uns," and for once forgets theory and relies upon practice. This is all very well.

3. Will a mass of Spurs, disproportioned to the vigor of the Tree, prevent the setting of the Fruit?—On this head we must admit that there is some plausibility of truth in M. Jonghe's remarks; though we are by no means assured that this is the fact. We have noticed that some pears produce a greater quantity of fruit buds than others, the Duchess of Angouleme, for instance; and though one mass of bloom, they often fail to set a fruit. That this is owing to the exhaustion of the powers of the tree to so great an extent as to prevent the fruit from forming, is an old theory, noticed in *Loudon's Magazine* some years ago, and we have been inclined to admit its correctness; yet when we have seen young trees, with only half a dozen clusters of buds, drop their flowers in the same way as old ones covered with bloom, our belief has been checked, and we have been again thrown upon the sea of doubt.

The form into which Dr. Lindley has put M. Jonghe's remark about spurs, is certainly ingenious, at the least, and we think one he never contemplated. What the latter intended to say was, that the overloaded spurs, like an overloaded crop, were too numerous for the energies of the tree; and hence the blossoms, being imperfectly set, drop off. There is some plausibility in this. But the connection which Dr. Lindley has attempted to make out between this and the power of the blossoms to resist frost, is not to us so "striking a view" of the case as he seems to infer.

4. Is the English mode of Cultivation all wrong?—We think the cultivators of England have too much skill and knowledge to be told all at once that their system of growing the pear is all wrong; that the failure or partial

failure of the crop, for four or five years past, is not owing to the climate, but to the mode of managing the trees. On the contrary, we do believe it is owing, in a great degree, to the former cause, and that the same causes operate here. No better experience can be adduced in favor of this than that afforded the present year, when the pear crop of this neighborhood, at least, is a partial failure. Trees which flowered sparingly, and trees which were as white as snow with blossoms, shared alike. In many localities there is not a fruit set. A cultivator has informed us that in 1852 and 1853 his trees bore upwards of fifty bushels each year, but that this season he has not ONE BUSHEL. The 7th of May the thermometer fell to 27°, and in a day or two afterwards scarcely a blossom was left upon the trees. Now it is needless to say that all these trees were not overloaded with spurs, as any practical man well knows that, in a garden of five hundred trees, some blossom sparingly and others full, so that out of so many some would have a crop. We give another instance: we have two parallel rows of trees, 1000 feet long—one Louise Bonne of Jersey, the other Glout Morceau; the former bore a heavy crop last year, the latter only a very small one. This year both blossomed full, yet the Louise Bonne are covered with fruit, while the Glout Morceau dropped more than two thirds of the blossoms. Here was the same locality, same soil, same pruning, same manuring, set out the same day and same year. These facts appear to be satisfactory; they show that some cause, beyond anything in the growth or management of the tree, prevents the setting and swelling up of the fruit.

Certain pears bear regularly every year, and it is useless to deny that it is because they are hardier varieties, and possess the power of resisting frost, just as much as they possess any other peculiarity. The Seckel, Bartlett, Buffum, Swan's Orange, and, indeed, most of our American and many foreign ones, are of this character, and can be relied upon, grafted high or low; while there are others which require mild and genial weather at the time of blooming, receiving a check with the least cold, or too much wet, that is fatal to the blossoms. These kinds, though many of them the choicest, should not be selected for exposed places, but only those taken which are known to be the hardiest. We are fortunate in having average crops of fine pears nearly every year; and cannot complain as our English neighbors do, who have not had a pear season for five consecutive years; still, the principles of cultivation laid down by M. Jonghe, if true, are applicable here as well as there; and if what we have said is not the experience of our friends, we should be most happy to hear from them on this interesting subject, which we may refer to again.—Ed.

Art. IV. *Scott's Seedling Strawberry.* By the Editor.

No fruit has received more attention at the hands of American cultivators than the strawberry. Since the production of our seedlings in 1834, an immense number have been raised, —a number which cannot be very nearly ascertained: but of those which have been raised and introduced to notice as possessing superior qualities, there are at least *two hundred.* Yet how many of the whole number are worth growing? We venture to suggest not a dozen. This single fact shows that it is no easy task to raise new kinds, superior to the older ones, or even equal to them, and that nearly the maximum of excellence has been obtained in this fine fruit. This, at least, would be the natural conclusion from the experience of the past twenty years. We do not doubt that there will be improvements; but only with the most careful hybridizing, and seed saving, and even then so slight, as to be unobservable by many. Even in England, Keen's Seedling, raised in 1818, and the British Queen in 1834, are the only prominent kinds cultivated there. We do not make these remarks to discourage cultivators in their attempt to grow seedlings; far from it. But we deem it our duty to tell them what progress has been made, and what they may reasonably expect, so that their labors will not end in disappointment. So many comparatively worthless sorts have from time to time been highly recommended, that some individuals think if a strawberry is only a new seedling, it is sufficient to give it a claim upon public attention. But this is not so; and recent

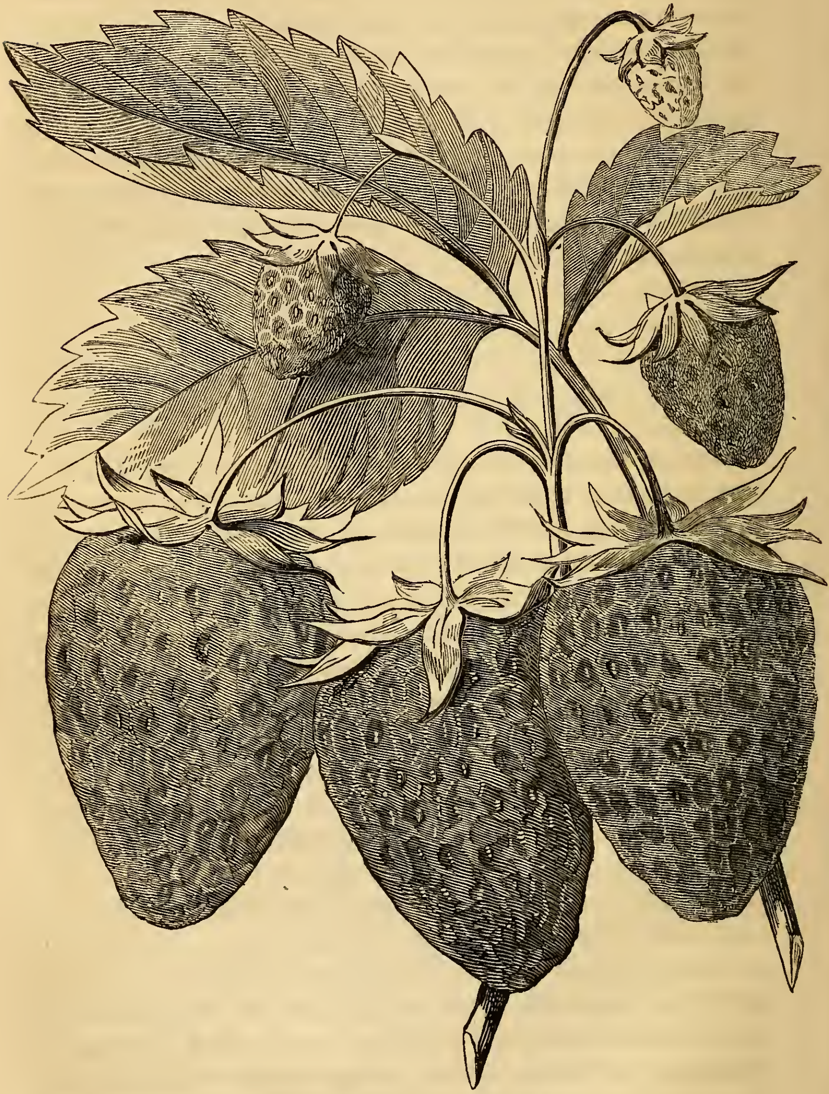

Fig 20. Scott's Seedling Strawberry.

experience has proved that, with the few really sterling sorts which we now possess, cultivators will remain very well satisfied, unless the new seedlings possess some peculiar merits.

It is to one of the latter description that we would now call the attention of lovers of the strawberry, viz., SCOTT'S SEEDLING, *(fig. 20.)* This variety was raised five or six years ago, by Mr. Scott of Brighton, Mass., from the seed of the Prince Albert, an English variety, impregnated, we believe, with the Boston Pine. He has now had it in full bearing three or four years, having four or five acres of plants, and has proved its qualities very thoroughly, at least as a market fruit; having sold many thousand boxes, at a higher price than any other kind, except Hovey's Seedling. All who have tasted it speak in high terms of its beauty and excellence.

In 1853 we examined the beds when in bearing, and were surprised at seeing such a fine crop. The land was light, and the season dry, yet the vines were full of its long and rich crimson scarlet fruit, proving it an abundant bearer, and very hardy, as Mr. Scott never protects his beds in winter. The berries are very long, and of rather peculiar shape, the flesh soft and melting, and the flavor rich, with a kind of orange perfume. The vines are of dwarfish growth, with rather short petioles, and smallish leaflets, of a light yellowish green. We annex a description.

FRUIT, large, conical, one and three quarters inches long, and about one and a half in diameter, at the base; color, deep rich crimson scarlet, with a shining surface; seeds, yellowish, rather deeply imbedded; flesh, pale red, little hollow at the core, not over juicy, but rich, buttery and melting, with a peculiar orange flavor. Calyx, large, spreading, projecting beyond the fruit. Stem, moderately stout. Staminate.

Our engraving is copied from an elegant drawing by Mr. W. Sharp, but only represents a few of the berries, which are borne in clusters of from fifteen to twenty in each truss. We can commend Scott's Seedling as one of the best strawberries recently produced.

ART. V. *To obtain Dwarf Blooming Plants of Nerium splendens.* By C. B.

THE following mode of cultivating the Oleander appeared in Harrison's *Floricultural Cabinet* for 1846. I have tried the plan upon a plant out of doors, the present season, and have now a specimen in full bloom, of beautiful form, taken from the old stock last summer, and about two feet high.

"In April I looked over my old plants, and discovered those shoots which had a leading bud of blossom; I then took a small garden pot, knocked the bottom out, and carefully drew the shoot through, at about six inches below its crown; I notched the stem like a carnation, putting a bit of soil to keep the tongue open. I then tied a piece of sheet lead under the pot, to enable me to fill it with fine rich soil. I pressed the soil tight, and placed the pot in a hothouse for a month; the layers rooted speedily, I then cut it off the parent, repotted into a larger pot, kept it in the hothouse a fortnight longer, which was then the first week in June, and a most beautiful bloom succeeded upon all the plants, and they not more than a foot high. A free supply of water was given, whilst striking root as well as subsequently."

Boston, August, 1854.

ART. VI. *Floricultural and Botanical Notices of New and Beautiful Plants, figured in Foreign Periodicals; with descriptions of those introduced to, or originated in, American Collections.*

VICTORIA REGIA.—This splendid aquatic will soon be in bloom again in our vicinity. Mr. Allen, of Salem, has another plant raised from seed in the place of the one that died, which will soon be in flower. He has a new, large and commodious house erected for it, where its ample foliage and superb flowers will be shown to the best advantage.

Mr. D. W. Lincoln of Worcester, we also observe, has a plant which will soon be in bloom, when the citizens of that city will have an opportunity to examine this wonderful production of the Western world.

Mr. J. F. Allen's magnificent volume, giving the history of the plant and its growth in the United States, with six illustrations by our artist Mr. Sharp, in the finest style of chromo-lithography, is just published, and can be purchased of the author, or the printers, Messrs. Dutton & Wentworth, or Mess. Hovey & Co., and, we presume, booksellers generally. It is executed in the highest style of this art, and is a work creditable alike to Mr. Allen and Mr. Sharp, who has spared no pains to render it superior to Dr. Hooker's folio work on the same subject.

New Phloxes.—In our last volume we gave a brief account of some of the new phloxes. Since then, we have had most of them in bloom, and also other new ones of more recent date; they are mostly exceedingly beautiful and distinct, and worthy of a place in every collection.

Some of the finest are Madame Corbay, Madame Veillard, Madame Lefebre, Madame Milleret, Dieul Comtesse de la Marne, Carmarina, purpurea superba, Dr. Andry, and Roi Leopold, the latter the most distinct and elegant striped variety yet introduced. The heads of flowers are much larger than Van Houtteii, being a kind of panicle with numerous lateral branches, like decussàta, but more pyramidal than the latter; the individual flowers are also large and more distinctly striped.

American Verbenas in England.—Some time since, we noticed the flowering of our seedling verbena "America," in the collection of Mr. C. Turner, nurseryman near London, and gave his opinion of it. Recently we have been pleased to notice that another of our seedlings has passed the ordeal of the National Floricultural Society, who recommend nothing that is not the best of its kind. At a meeting held July 27th, Mr. Turner exhibited a variety of verbenas, and among them "Orb of Day," which was pronounced "an excellent deep scarlet variety for bedding."

Art. VII. *Suburban Visits.*

Residence of Mr. E. W. Bull, Concord, Mass., Aug. 8th.—On the descending slope of a rather steep hill, on the southerly side of the old Cóncord road from Boston, and but little distant from the battle ground which has made this town so prominent in the annals of our country, is situated the residence of Mr. Bull, whose name has recently become familiar to cultivators as the originator of the Concord grape. His grounds occupy eight or ten acres, mostly a very thin sandy soil, and lay open to the south, with a fine prospect over many hundred acres of what was some years since a neglected meadow,—but now a fertile plain, covered with luxuriant grasses, waving grain, growing crops, and orchards of the finest fruit: beyond, from east to west, a finely wooded range of hills bounds the view. All this improvement has been effected by the good judgment and industry of the owners of this land, among whom may be named, as setting the example to others, the late Capt. Moore, one of the best practical farmers in the county. His place, which nearly adjoins Mr. Bull's, is now carried on with the same zeal and energy by his son, Capt. J. B. Moore, who is a most successful fruit grower, a nurseryman to some extent, and, withal, a most thorough practical farmer.

Mr. Bull removed from Boston some fifteen or more years since, for the benefit of his health, and naturally extremely fond of horticultural pursuits, in which he had been an amateur participator even in the precincts of a small city garden, he carried with him some of the best kinds of our various fruits, and particularly the Isabella and Catawba grapes, then more rare than at present. These seemed to flourish on his warm sandy soil better than anything else, and to their culture he gave considerable attention; adding, from time to time, all the rare sorts which were offered for sale, with a view to test their qualities, and among them the Diana.

But, unfortunately, neither the Isabella nor Catawba could be relied upon for a crop, even in the most favorable seasons, and, disappointed in finding a really eatable fruit among the new kinds which he obtained from various sources, except the Diana, he thought the only way to procure what he most wanted—a hardy, early, and choice grape—was to attempt it through the seed; and this he set about at once. In a distant part of his garden a wild vine had sprung up, from some accidental seed thrown into the ground or dropped by birds, which, though similar to the common wild type in nearly every characteristic, produced a very sweet grape, ripening the last part of August. This struck him as a favorable commencement, as earliness was the main thing to be gained. He removed it to the trellis near his Catawba and other vines, gave it good cultivation, gathered the crop, and planted the seeds; and it was the produce of these seeds that gave him, most fortunately, the Concord Grape. Such is the history of this seedling, which has already briefly been given by Mr. Bull himself, in his communication in our February number of the present volume, (p. 65.)

Our own account of this grape, with an engraving representing the size, form, and general appearance of the fruit, accompanied Mr. Bull's communication. We had been supplied, the last autumn, with an abundance of ripe clusters from week to week, giving us every opportunity to test its qualities with the Isabella and Diana from our own grounds, and our opinion was formed after repeated trials of the fruit. The vine in its bearing state we had never seen, but knowing that whatever Mr. Bull might state in regard to it could be relied upon, we had no hesitation in recommending the Concord as in every respect a most superior grape.

But no new fruit has ever yet been introduced which has not found its defamers, and with the Concord grape there seems to have been uncommon pains used, by those who never tasted it, to decry its excellence. A correspondent (anonymous, of course) of the *Horticulturist* stated that "the grape, either in bunch or berry, was not *one third* as large as pictured" in the beautiful engraving which we gave of it. We happened to have had a cluster of the fruit painted last September, by our artist, Mr. Sharp, which was the exact size of the specimen, and it was so long we could not use it in the size of our page, but had to take a copy of a smaller bunch made previously by another artist. We only mention this here to show the absurdity of such statements, as we have seen bunches of the Isabella six inches long, and weighing one pound each.

The Concord grape vine, however, in a full bearing state, we had not seen, and our visit to Mr. Bull was made to examine for ourselves its growth, habit, vigor, and general characteristics. After what we have said of it already, our friends may be surprised when we say, the "half was not told." We were never more astonished ourselves. Growing on the thin and hungry sand, on the side of a steep declivity, we found the Concord in the most vigorous and beautiful condition: true, with some of the vines, and there are several from three to eight years old, Mr. Bull has tried to see what can be done with good treatment, which they have never before had; and therefore they have been well manured and watered, without which, with such a large crop upon them, they must have half perished in this dry summer. But there were vines with and without good management, on purpose to show what they will do under the most ordinary treatment, and all who may take the pains to visit Mr. Bull will see for themselves.

We found the old parent vine one mass of branches, foliage, and fruit; some of the leaves measured *thirteen inches in breadth*, and the clusters *seven and a half inches long and five and a half broad* across the shoulders; this, too, on the 8th of August, one month before maturity! Indeed, the clusters fully averaged in size those on vines of the Hamburg under glass. Two vines four years planted out, and running over a trellised arbor, had each about *sixty* bunches, several of them of the size just named. This was altogether too large a crop for vines of that age to bear; thirty clusters each, or sixty on both, would be an ample crop: but Mr. Bull intends that all may know what the vine will do; and that the grapes may be tasted freely, he declines to reduce the number, though it may greatly increase the size and beauty of the clusters. Not a speck of mildew or rot has been seen, and the foliage appears to be so thick and vigorous that even the thrip seems to keep shy of this variety, preferring the tender foliage of the Isabella. Of the hardiness of the Concord we can only say, that, with the thermometer at 28° *below* zero, last winter, not an inch of wood was injured; while the Isabella was killed in some parts of Concord nearly to the ground.

Mr. Bull has the Isabella in a most favorable situation on the southwesterly side of his house, trained to a trellis, slightly manured; yet here,—and the comparison for earliness and even quality should always be made from the same ground,—it never fully matures a crop. The Concord, everywhere, is growing on open trellises, or scrambling without support over the ground.

The successful issue of this first attempt has induced Mr. Bull to go largely into the growth of seedlings, and he has now upwards of 2000 plants of various ages, from the sowing of this year, to those four years planted, and nearly in a bearing state. We examined the foliage of many of them, and cannot but think that some decidedly improved varieties will be produced. Much time and labor will be consumed in testing fully their qualities, but Mr. Bull intends to do so, and we doubt not a discerning public will reward him in proportion as his results are important.

We have said nothing about the Concord as a wine grape; we are not ourselves, neither is Mr. Bull, sufficiently acquainted with wine-making to form an opinion of what a real wine grape should be to supply this; but so far as he has tried, and good judges have tasted his wine, it would appear that the Concord will be a wine grape. We drank some of his wine made in 1852, which we thought exceedingly pleasant and high flavored; its only fault was its sweetness. Yet Mr. Bull only put four pounds of sugar to *twenty bottles* of the juice, which quantity was obtained from just *one bushel* of the grapes; thus showing that it supplies that great desideratum for a wine grape, "possessing sugar in abundance." Another year, when his crop will be many bushels, if nothing happens, he intends to have a quantity of the wine made by some experienced man, in order to test its value for that purpose.

We need scarcely add, after what we have said, that Mr. Bull's grounds are of the lightest description of soil; so thin, indeed, that we have wondered almost that he should attempt to achieve great results. A warm exposure and a dry subsoil are certainly important points in the growth of the grape; but when these are overbalanced by a soil so porous that it will scarcely hold the least moisture, it becomes a question whether a more fertile place, less favorably located, would not afford more satisfaction to the cultivator.

Mr. Bull has in contemplation many improvements upon his place, which, with some further account of his new seedling, we hope to notice again at some future day.

NURSERY OF DR. D. WOOD, DIGHTON, MASS., AUG. 16.—Dighton is a pleasant village adjoining the flourishing town of Taunton, and on the old road leading to Warren and Bristol, R. I., six or seven miles from the railroad station in the latter town, is situated the large domain and rather extensive nursery of Dr. Wood. The grounds, or that part of them devoted to nursery purposes, form a nearly level plain, skirted on one side by a small stream, and bounded on the other by well-wooded hills, covered with oaks and pines; only a part of this plain is planted with trees, perhaps twenty acres or so: the soil is a light sandy loam of good depth, and, with good manuring, produces a fine annual growth. Evergreens in particular seem to flourish exceedingly, and the arbor vitæ, of which the Dr. has a fine stock, adapt themselves to the soil rapidly, and maintain a vigorous aspect.

This is the only nursery of large extent in this part of the State, and supplies the wants of amateur cultivators and gentlemen forming new residences in the adjoining towns. A fine collection of apples and a capital stock of trees has the Doctor. His pears are not so abundant, though he has a few good trees; the land is rather too light for pears. Of peaches and other fruits, he has a fine supply for all retail demands.

There is a fine young orchard of apples occupying several acres, which are just coming into bearing.

Connected with the nursery there is a greenhouse and grapery, and a year or two since the Doctor had a fine stock of plants; but the limited demand from the immediate vicinity, and the distance from Boston, did not warrant him in keeping up the collection, and latterly he has disposed of all the plants, and given up the house entirely to grapes, of which there was a small crop on the young vines recently planted.

Besides the active labors of the Doctor in the nursery, he finds time to manufacture some of the most beautiful rustic chairs we have ever seen. These are made mostly from the wood of the oak, which has been attacked by insects, causing large tubercles and swellings, just in the same way as some similar insect attacks the plum, forming the black knots so destructive to those trees. These swellings often appear on limbs of the oak four to six inches in diameter, and from this size down to the most slender shoot. The Doctor showed us piles of branches of various sizes, which were gathered up for the manufacture of chairs. When divested of the outer rough bark, the wood shows a beautiful grain, twisting and curling among the excrescences, which, when varnished, appear more like some elaborate carving than the natural work of an insect. These chairs cost from twenty-five to forty dollars each, and are beautiful specimens of rustic art, well worth the amount.

To cultivators and all who are interested in the growth of the plum, we think the inspection of these specimens of the oak branches will satisfactorily show that the excrescences of the former tree are produced by some similar insect, and dispel the idea that they are a *fungus* growth, or some disease of the sap, as heretofore advanced by some writers.

Dr. Wood is one of the most enterprising citizens of the town, and his kind hospitality is only surpassed by his generosity and benevolent disposition.

MISCELLANEOUS INTELLIGENCE.

Art. I. *Domestic Notices.*

Horticultural Exhibitions in September and October.—The season thus far is not auspicious for fine autumnal shows; indeed, if the present dry weather continues many days longer, we think we may safely say they will be a failure everywhere. The fruits are scarcely half their size at this date, now only a week or two from the date of some exhibitions. Immediate and liberal rains will scarcely benefit the crops now, though it will save them from a complete failure. The following are the principal Exhibitions:—

American Pomological at Boston, commencing on Wednesday, September 13, at the Massachusetts Horticultural Society's Hall.

Massachusetts Horticultural Society.—The 26th Annual Exhibition commences on Tuesday, September 12th, and will be continued till Saturday, September 16, at Boston.

New York State Agricultural Society will hold their Annual Fair in Hamilton Square, New York city, on the 3d, 4th, 5th and 6th of October.

The American Institute and *New York Horticultural Society*, omit their separate exhibitions, and combine with the New York State Society.

The Pennsylvania Horticultural Society omit their Annual Show this year, and assist in getting up the State Fair at Philadelphia, Sept. 27, 28 and 29.

The Brooklyn (N. Y.) Horticultural Society will hold its Annual Exhibition on the 19, 20 and 21st days of September, at the Brooklyn Athenæum.—Ed.

North Western Pomological Convention.—The next Annual Meeting of this Association will be held at Burlington, Iowa, commencing on the last Tuesday (the 26th) of September, at 10 o'clock, A. M., and continuing four days. Communications on any or all branches of Horticulture solicited, which, together with any boxes of specimens, may be directed to the "N. W. Pomological Convention, care of Messrs. Avery, Burlington, Iowa." Editors, friendly to the cause, are respectfully requested to notice. By order, F. K. Phœnix, *Corresponding Secretary.*

Art. II. *Massachusetts Horticultural Society.*

Saturday, July 1, 1854.—The stated Quarterly Meeting of the Society was held to day,—the President in the chair.

The President, from the Executive Committee, reported in relation to the Society's real estate, and the arrangements desired to be made by the adjoining proprietor.

Mr. J. Breck offered the following motion: Voted, "That the Report of the Select Committee appointed in April to examine into the doings of the Fruit Committee for 1853, and submitted to the Society on Saturday, May 26th, accepted and entered on the records, be EXPUNGED therefrom, and BLACK LINES drawn across the same by the President at this meeting."

Mr. Breck then proceeded to support this motion by reading documents signed by himself and Capt. Lovett, and to which they were ready to make oath, denying every statement in the Report of that Committee.

Pending the discussions, on motion of M. P. Wilder, the meeting was adjourned one week, to July 8.

July 8.—An adjourned meeting of the Society was held to-day,—the President in the chair.

Mr. C. M. Hovey, in the unavoidable absence of Mr. Breck, moved to take up the unfinished business from the table, viz., the motion submitted by Mr. Breck at the last meeting. Rejected.

Mr. W. H. Strong moved that a Committee of five be appointed by the President to investigate the Report submitted by W. S. King, and also any further doings of the Fruit Committee for 1853, in relation to the subject. Adopted, and the President asked for one week to appoint the Committee, which was agreed to.

On motion of Rev. Mr. Pope the Committee were directed to report in one fortnight.

Adjourned one week, to July 15.

July 15.—An adjourned meeting of the Society was held to-day,—the President in the chair.

The President reported the names of the following gentlemen as the Committee to examine into the doings of the Select Committee, and the Report submitted by them, viz.: Hon. G. R. Russell, A. Aspinwall, E. S. Rand, J. J. Dixwell, and Dr. Estes Howe. It was voted that the President have power to fill vacancies previous to the next meeting.

Chas. D. Swain, Roxbury, and A. C. Mayhew, Boston, were elected members.

Adjourned one week, to July 22.

July 22.—An adjourned meeting of the Society was held to-day,—Vice President French in the chair.

No business of importance was transacted, and the meeting adjourned for one week, to July 29.

July 29.—An adjourned meeting of the Society was held to-day,—the President in the chair.

Mr. French made some statements in relation to the arrangement with Mr. Parker, the owner of the adjoining estate.

On motion of M. P. Wilder, Messrs. Wilder, French, and Walker were appointed a Committee to present resolutions upon the death of the late S. Downer, Esq.

The Corresponding Secretary read a letter from G. Mountfort, consul at Candia.

On motion of W. S. King, it was voted that a Committee to nominate a list of officers for the ensuing year be chosen by ballot at the next meeting.

Mr. French made a motion that a Special Committee upon exchanges be chosen, and the Corresponding Secretary, the Chairman of the Library, Fruit, Flower and Vegetable Committees were appointed that Committee.

R. M. Copeland (Roxbury) moved that his Report on Scraping Trees be taken up for discussion two weeks from this date.

I. Lombard, Boston; N. W. Turner, S. Malden; F. O. Prince, Winchester; R. G. Lockwood, T. T. Sawyer, J. Brown, and Jas. Knott, Charlestown, were elected members.

Adjourned one week, to August 4.

The Fruit Committee, at their meeting for the last Saturday in July, made the following

AWARD OF PREMIUMS FOR FRUITS.

CHERRIES.—For the best, to Dr. G. B. Cordwell, for Black Tartarian, the first premium, $5.

For the second best, to Wm. Bacon, for the same variety, $3.

For the third best, to J. W. Foster, for the same variety, $2.

STRAWBERRIES.—For the best, to J. B. Moore, for Hovey's Seedling, $6.

FORCED GRAPES.—For the best, to Mrs. F. B. Durfee, the first premium, $8.

For the second best, to Nahum Stetson, $6.

For the third best, to W. C. Strong, $4.

GRATUITY.—To James Nugent, $4.

FORCED PEACHES.—For the best, to C. S. Holbrook, the first premium, $6.

For the second best, to W. C. Strong, $4.

Aug. 4.—An adjourned meeting of the Society was held to-day,—the President in the chair.

The President announced that the Hon. G. R. Russell was absent from home, and could not serve upon the Committee to which he was appointed; also, that J. J. Dixwell declined serving, and their places were filled by adding F. Tudor and J. S. Sleeper to the Committee.

Mr. Wilder, from the Committee appointed for that object, reported the following resolutions on the death of Mr. Downer, which were unanimously adopted:—

Resolved, That while we deplore the loss of other eminent associates, who have been called from their earthly existence, we regard with grief and regret the death of our elder member, Samuel Downer, Esq.

Resolved, That although this Society has for many years been deprived of his counsel and labor, in consequence of his age and infirmities, yet that we hold in grateful remembrance his worthy services, and will ever cherish his memory, as one of the founders of this institution, and as a pioneer in the pomology of New England.

Resolved, That in this bereavement we sympathize with the family of the deceased, and as a token of esteem for his valuable contributions to the cause we seek to promote, that these resolves be entered upon the records of this Society, and published in the public journals.

Resolved, That a copy of these proceedings be forwarded to the family of the deceased.

The Society then proceeded to ballot for a nominating Committee, and the following members were chosen: E. M. Richards, C. Newhall, E. A. Story, A. Bowditch, and H. Bradlee.

On motion of Mr. Walker, the Report of R. M. Copeland on Scraping Trees was taken up and laid upon the table, ready for discussion by the Society.

Adjourned two weeks, to August 19.

Aug. 19.—An adjourned meeting of the Society was held to-day,—the President in the chair.

The President reported to the Society the conditions of an arrangement they had with Mr. Parker, viz.:—

To set his building 22 inches back from School street. To pay the Society for one half of the land on which the division wall stands, at $8 per foot; and to pay half its present cost. To give the Society the right to use the new wall Mr. Parker erects in the rear of the present one, and to pay a bonus of $500; the President to execute the necessary papers to carry out the arrangement.

On motion of C. M. Hovey, it was voted that the President at the next meeting report the names of fifteen or twenty delegates to the Pomological Convention to be holden in Boston.

Adjourned one week, to August 26.

Aug. 26.—An adjourned meeting of the Society was held to-day,—the President in the chair.

The President reported the following list of delegates to the Pomological Convention, viz.:—

S. Walker, B. V. French, C. Newhall, Jos. Stickney, E. M. Richards, Dr. E. Wight, J. Breck, C. M. Hovey, W. C. Strong, W. R. Austin, L. Winship, R. Manning, J. F. C. Hyde, E. W. Bull, J. F. Allen, S. Downer, R. W. Ames, I. Fay, J. A. Kenrick, F. Tudor, A. W. Stetson, B. Harrington, Jos. Richardson and W. Bacon. To this list the President was added as Chairman, and the delegates were duly elected.

Messrs. Walker, Wilder and Breck were appointed a Committee to present resolutions upon the death of Capt. Jos. Lovett.

The Committee of Arrangements made a Report in relation to the Annual Exhibition.

Mr. C. M. Hovey read a series of resolves expressive of the sense of the Society at the death of their late member, Capt. Lovett, and they were referred to the Committee appointed for that object.

Adjourned one week, to September 2.

The Committee on Fruits, at a meeting this day, awarded premiums as follows:—

AWARD OF PREMIUMS AND GRATUITIES ON FRUIT.

RASPBERRIES.—For the best, to J. W. Foster, $5.

BLACKBERRIES.—For the best, to J. Nugent, for the Improved High Bush, $5.

For the second best, to J. Richardson, for the same, $3.

For the third best, to G. Merriam, for the same, $2.

To C. E. Grant, a gratuity of $2.

Summer Apples.—For the best, to Messrs. Burr, for Red Astrachan, $6.
For the second best, to G. B. Cutter, for the Williams, $4.
To J. W. Foster, for Early Harvest; B. Harrington, for Williams; A. D. Williams, for the same; and M. H. Simpson, for Red Astrachan, each, a gratuity of $4.

Summer Pears.—For the best, to Messrs. Hovey & Co., for the Boston, the first premium of $6.
For the second best, to Winship & Co., for Winship's Seedling, $4.
To H. Vandine, for Muskingum, a gratuity of $4.

Art. III. *Obituary.*

Death of Samuel Downer. Died, on Sunday morning, July 23d, at his residence in Dorchester, Mr. Samuel Downer, in his 81st year.

It is with feelings of the deepest regret that we record the death of Mr. Downer, whose name is familiar to all who have noted the progress of Horticulture in this country, and more particularly in our immediate vicinity. More especially is his name identified with Pomological science, to which he devoted many years of his life, and particularly in bringing to notice our native fruits, seeking out all that were worthy of cultivation, and urging their claims to greater attention. The fame of the Downer cherry, originated by him, has extended throughout the land, making his name known to all who cultivate this delicious fruit.

Mr. Downer was one of the pioneers in the establishment of the Horticultural Society, and he watched with a zealous care its early progress, contributing liberally from his own large collection to its exhibitions, inviting others to assist in building it up, and with his pen, through the *New England Farmer*, urging its importance in making known our new fruits, and its usefulness in disseminating correct information. For many years he acted upon various committees, reported upon the fruits exhibited, and did not retire from this sphere of usefulness, until he saw younger members coming up to take the place which his ripening age must soon induce him to leave.

One of the best articles that has ever appeared in our pages was from Mr. Downer, giving a descriptive notice of all the popular pears at that time cultivated, (Vol. I, p. 81,) and more especially our native sorts, which he had been chiefly instrumental in bringing to notice. The original descriptions of the Dix, Andrews, Lewis, Heathcot, Fulton, Harvard, &c., were contributed by him to the columns of the old *New England Farmer*. He lived to see these much abused natives become our most popular varieties.

In his death, as peaceful as his life was useful, Pomological science has lost one of its most zealous friends.

Died, Tuesday, August 22, at his residence in Beverly, Capt. Josiah Lovett, 2d, aged 63.

It is our melancholy duty to record the rather sudden death of Capt. Lovett. Always in the enjoyment of excellent health, it was not until the early part of summer that a slight illness confined him to the house: but what appeared only slight at first, gradually assumed a more severe form, and he finally sank under his disease.

Capt. Lovett was one of our most energetic and active fruit cultivators. Accustomed in early life to plough the seas, in his later years he seems to have been no less successful in ploughing the land. Whatever he undertook to do he carried out in seaman-like manner; not by halves, but in the most complete way. His garden, which we recently gave some account of, absorbed much of his time, though still engaged in business, with much of his property embarked on the perilous sea. But his pride was in his Horticultural skill. Nobody could produce larger strawberries, or blackberries, or better pears and plums; week after week, year after year these specimens of his skill were placed upon the tables of the Massachusetts Horticultural Society, and almost as surely carried off the prizes; he was always a most formidable competitor.

Capt. Lovett was one of the most efficient members of the Massachusetts Horticultural Society, and up to last January had acted upon various committees, more particularly the Committee on Fruits; and to his sound judgment the Society is deeply indebted for the high reputation of its reports on various fruits. Nothing secondary would ever meet with any favor from him. He was also zealous in the introduction of new fruits, more particularly apples, of which he had one of the finest collections in Essex county.

Occasionally Capt. Lovett gave the public the results of his experience; but it was hard to prevail upon him to do so. Good cultivation, he believed, like good seamanship, could not be learned by reading alone: practice only made perfect. We, however, from time to time prevailed upon him to write an article, and several will be found scattered through our past volumes. It is needless to say that they are of the most practical character, and just such as might be expected from one whose rule it was to test everything by experience.

The death of Capt. Lovett will be deeply lamented. Engaged in the active duties of life, associated for a long period with the numerous members of the Massachusetts Horticultural Society, he leaves a large circle of friends who mourn his loss.

HORTICULTURAL OPERATIONS

FOR SEPTEMBER.

FRUIT DEPARTMENT.

August has been one of the dryest months for some years; the only rain having fallen in the vicinity being, at the most, one inch, and in some localities not half an inch. This, with the prevailing drought when August set in, has been more severe and trying to vegetation than any year we recollect for a long time. In consequence of this, vegetation has come to a complete stand, and in some places trees are actually dying. With the advance of this month, however, we look for refreshing rains to invigorate the now famishing crops.

Grape Vines in both the forcing house and grapery will need no particular attention other than to air liberally, in order to ripen the wood. Cold houses will now be maturing their crop, and should be aired night and day in order to give the berries a good color.

Strawberry Beds may be now made; the dry month has delayed this work, usually done in August. Keep old beds clear of weeds.

Peach Trees should now be budded.

FLOWER DEPARTMENT.

The season for housing plants and preparing for winter is approaching, and the ambitious gardener will now find enough to occupy his attention. Every house should be thoroughly cleaned, and made ready for the reception of the plants, some of the more tender kinds of which should be removed indoors by the 20th of the month. A great deal of potting should be done this month, as it is bad policy to leave out plants till they receive a check from early frosts. Frames of every kind should be placed in readiness to protect any plants, in order to save the labor of at once crowding everything into the houses.

Camellias should be liberally watered, and freely syringed; a check now will seriously injure them, and cause the dropping of the flower buds. Towards the last of the month preparations should be made to remove them into the house. Top-dress the soil, and clean and wash the pots.

Azaleas should be removed to the house before heavy rains set in, or should be protected in frames.

Chrysanthemums should be occasionally watered with liquid guano. Remove to the house before frosty nights.

Chinese Primroses should have a shift now, and be removed to the house in good season.

Verbenas for winter should be propagated by cuttings, or layered into small pots.

Neapolitan Violets for winter blooming in the house should be potted this month.

Pansy Seed for spring blooming may be yet planted.

All kinds of Plants intended for blooming in winter should now be taken carefully from the ground, potted, and placed in frames a few days, where they can be shaded and protected until they are sufficiently rooted to remove to the greenhouse.

All tender plants, such as Salvias, Petunias, Lantanas, &c., should be propagated for a stock for next spring.

THE MAGAZINE

OF

HORTICULTURE.

OCTOBER, 1854.

ORIGINAL COMMUNICATIONS.

ART. I. *Our Neglected American Trees.*

As the season is approaching when our forests begin to put on their magnificent autumnal tints of gold and scarlet and purple,—peculiar to our American woodland scenery,—we are reminded how deficient are the artificial plantations around our villa and suburban residences,—our lawns and pleasure grounds,—of these autumnal glories, so lavishly exhibited wherever masses of woodland or forest greet our eye; rendering this period of the year the most attractive to the lover of picturesque beauty. It is certainly somewhat surprising that in nearly all the plantations which have been made for ornamental purposes, there should have been so few attempts to produce this charming feature of our woodland scenery, leaving us to seek the country for a display of those splendid hues which give such a magic glow to the American forests, and satisfying ourselves with the yellow and dingy tints of the small and popular class of trees, which too often fill our grounds to the exclusion of others of more varied and superior beauty.

This defect, so prominent to every observer of our natural scenery, must be attributed in a great degree to a want of a knowledge of the trees whose changing foliage adds so much to the autumnal landscape; for while nearly all admire the deep and rich tints so conspicuous at this season, few know that they are peculiar to certain species or varieties, but suppose they are the common change going on among all trees before they drop their summer drapery. Few who plant an elm or a lime bestow a thought upon anything more than its growth and shade. The season of its budding out,—the autumnal tints of the foliage,—and the character of the branches and spray in winter, are subjects which occur to but few among the mass who plant trees. Hence, we attribute the absence of so many beautiful trees around our residences, more to the want of information than to any deficiency of good taste and a desire for pleasing effects.

We have already, on several occasions, alluded to our American trees and shrubs, and recommended them particularly to the notice of all amateur planters. But they have been neglected; and some of them to such an extent—are yet so rare in our grounds—that we have designated them our neglected trees. We have a great number of them spread over our whole country, many of them hardy and adapted to ornamental use with us, while others are tender, but equally suitable and desirable at the South. Some of them partake too of the character which we have just noticed, being exceedingly beautiful in autumn, adding to the variety of the landscape by the brilliant coloring of their foliage.

THE TUPELO TREE, (Nyssa multiflòra,) is one of the finest of our native trees, and although scattered over our forests, is almost as rare in cultivated grounds as the Magnolia. It is a peculiar tree, having a horizontal habit, its lower branches slightly drooping, very thickly set, and forming a broadly pyramidal or conical head. The foliage is broadly oval, alternate on the growing shoots, but in tufts of four or more on the end of the lateral branchlets, of a brilliant glossy green above, reflecting the light like those of a camellia. The young wood is of a brownish red, and the older wood of a dark ashy gray. The whole habit of the tree is compact without being stiff, the slight droop of the ends of the branches giving it a very distinct character. The foliage turns from its deep green to rich scarlet and crimson in the autumn, at which season the trees are usually covered with bright blue fruit rendering them the most conspicuous objects.

Unfortunately the tupelo is not so easily raised as some trees, which will prevent its being so generally introduced. It is known under the name of Peperedge tree, Snag tree, Horn pine, and often called Hornbeam. Near our residence in Cambridge there is a small group of six tupelos standing together, without any other tree within several rods, and though growing in the near vicinity of brick-yards where their growth has been injured by the sulphurous vapors from the burning kilns, they are beautiful at all times, their semi-flattish conical heads and thickly-set horizontal branches forming a marked contrast with other trees.

THE NETTLE TREE, (Céltis occidentàlis,) is another native, sparsely distributed throughout Massachusetts, but more abundant to the South. It bears a strong resemblance to the elm, and in some localities is known as the false elm. It is only a moderate sized tree, with branches nearly horizontal, but drooping somewhat at the ends. The leaves are similar to the elm, but not so large, being usually about two to three inches long, and one to two broad. They are of a deep green in summer, and change to a bright yellow in autumn. The flowers are succeeded by small purple berries, which hang on the tree till late in winter. By the fruit alone it may be readily distinguished from the elm. It is probably the least known of any of our native trees. It bears transplanting well, grows readily, is very hardy, and though its autumnal tints are similar to many other trees, it deserves introduction into every plantation.

THE SWEET GUM (Liquidambar styracíflura,) is one of our most beautiful trees, growing abundantly in the Middle States, where its spangled foliage contributes so much to the splendor of the autumnal scenery. According to Michaux it is the most extensively diffused of all our American trees, growing from Maine to Mexico, and from the Atlantic to the Mississippi; Mr. Emerson, however, was unable to find it throughout New England, though he does not doubt it may be growing here. It attains the height of 40 or 50 feet, with a straight trunk. The leaves vary from three to six inches, and are divided into five lobes, nearly star-shaped, bearing some resemblance to the Sugar Maple, though the lobes are deeper. In the autumn the foliage changes to a dull red. It is a very handsome tree for pleasure grounds, and being readily transplanted and of free growth, deserves a prominent place in every ornamental plantation.

THE DECIDUOUS CYPRESS, (*C*uprèssus dìstichum.) This elegant cypress, though a native of the sunny South, where it attains almost to the dimensions of the largest oaks, and is one of the most valuable timber trees, grows freely in the latitude of 42°, and unless in very bad locations is quite hardy. It is one of the most airy, light and graceful of trees, with a foliage as delicate as the sensitive plant; erect in its growth, forming a broad conical head, unlike its evergreen congeners, whose growth is pyramidal. It grows naturally in the greatest perfection in the miry swamps of the South, whose surface is annually irrigated by the spring floods which deposit a fresh layer of soil; there it is often 120 feet high, and 30 to 40 feet in circumference. It consequently prefers a deep, rich soil, not, however, where the water stands in winter, as in such localities its branches and sometimes the whole tree are injured, but where its roots can penetrate deeply and find nourishment. In such a place its growth is rapid, and it soon forms a fine tree. It transplants well, and there is no tree more deserving of the utmost attention than this. Yet, notwithstanding all its merits, it is only occasionally that a specimen of any size is seen in our vicinity. Even further South it is by no means a common tree in artificial plantations. Its tiny foliage changes to a deep red in autumn, but it soon falls off.

THE FLOWERING DOGWOOD, (*C*òrnus flòrida.) Among all the small trees of our Northern forests, few, if any, make a more conspicuous appearance than the flowering dogwood. In the month of May our woods are enlivened by its masses of snowy blossoms, which at a short distance resemble single white roses. These are produced at the ends of the branches in great profusion, often a dozen in a single cluster; they are succeeded in summer by green berries, which change to bright scarlet later in the season. The autumnal hues of the foliage are magnificent; first it changes to purple, then to a rich scarlet, and often with an admixture of crimson buff and orange above, and a glaucous purple below. It is then, with its scarlet berries, quite as prominent an object in the landscape, as when loaded with its white flowers in spring. Fortunately it is of the easiest cultivation; it transplants readily, even from its native forest, when carefully done, and comes into bloom at once.

THE RED BUD OR JUDAS TREE, (Cércis canadénsis.) Not one in ten of the many individuals who have seen this beautiful tree in our collection, ever heard its name or saw its like before, so little do we know our native trees. It is one of the finest of our early flowering small trees. Its numerous branches, which spring low down from the main stem, are literally covered with small pea-blossom shaped flowers of the deepest crimson, even before a green leaf makes its appearance; but soon the foliage covers the terminal shoots, and gradually the blossoms fade, until the branches are shorn of them, to be succeeded by hundreds of small slender pods, which clothe the stems until the heat of summer ripens them off, when the seed falls out, the pods curl up, and the stems are left bare. It is of the easiest cultivation, and for shrubberies, or even single trees, on the lawn, few are more beautiful at all seasons.

There are numerous other native trees as well as shrubs, which deserve notice here, but we only name a few of them now, leaving it to another opportunity to describe them at length.

TREES BEAUTIFUL FOR THEIR AUTUMNAL TINTS, are the Scarlet Oak, (*Q*uércus coccínea;) Scarlet Maple, (*A*ˋcer rùbrum;) Hop Hornbeam, (Ostrya virginica,) and White Ash, (*F*ráxinus americàna.)

TREES ORNAMENTAL FROM THEIR GENERAL CHARACTER. Kentucky Coffee Tree, (Gymnócladus canadénsis;) Canoe birch, (*B*étula papyràcea;) American Holly, (Ilex opàca;) American Chestnut, (*C*astànea americàna;) Yellow Wood, (Virgíl*ia* lùtea;) Ash-leaved Maple, (Negúndo fraxinfòlium;) Sassafras Tree, (*L*aúrus sassafras;) and Sweet Scented Crab apple, (*P*yrus coronària.)

ART. II. *Clouds.* By WILSON FLAGG.

THE sky would present very little in the day-time, to charm the sight or interest the mind, if it were destitute of clouds. From these proceed all the beautiful tints of sunrise and sunset, the rainbow and the various configurations that deck the arches of the firmament. The different forms and colors they assume in their progress through the atmosphere, and their ever varying positions and combinations are capable of awakening the most agreeable emotions of beauty and sublimity. I shall not speak of the scientific arrangements of clouds. The classifications of natural objects are necessary to the progress of science, to enable the mind to grasp all their species, and to understand their differences and their relations. But these artificial systems have done more than any vulgar prejudice to render the study of nature unpopular. The immense vocabulary of terms presented to the mind of the young student, gives him a magnified sense of the task he must perform, at the very threshold of Nature's temple, that discourages him, and deters him from entering within it. I shall simply treat of clouds as they appear to the eyes and the mind of a person of sensibility and fancy.

The greatest painters have delighted in the representation of clouds, knowing that there is no landscape that may not be improved by their celestial forms and tints, and that a scene representing any passion or situation may be heightened by such accompaniments, harmonizing with the cheerfulness or the sadness, with the lowliness or magnificence of the subject. Poets have ever been mindful of the same effects: and the Hebrew prophets have exalted the sublimity of their descriptions, and increased the efficacy of their prophecies and their admonitions, by employing imagery derived from these appearances, rightly deeming the scenery of the heavens the most proper to illustrate their sacred themes, and the divine attributes of the Deity. Hence the Lord, who set his bow in a cloud as the token of a covenant between him and the earth, is represented as making the clouds his chariot and his pavilion when ascending to heaven, or when descending to earth to speak to the messengers of his will.

I am at a loss whether to attribute the peculiar pleasure that attends us, on a sight of the varied forms and hues of clouds, to the physical effect of light and colors upon the sensorium, or to mental association. It is certain that no spectacle in nature produces so intense an emotion of cheerfulness and sublimity. The latter emotion is most commonly excited by sombre scenes, added to something that affects one with a certain amount of terror, while he retains a consciousness of security. But when the western clouds, piled in glittering arches one above another and widening as they recede from the great source of light, exhibit their several gradations of hues, from the outermost arch successively, of violet, purple, crimson, vermilion and orange, until the eyes are dazzled by the golden radiance that beams from the throne of day, the mind is affected with an emotion of sublimity, unallied with terror, and accompanied with the most cheerful exaltation.

Every scene in the universe is attended, when we behold it, by a peculiar and specific sensation. Our emotions are as nearly infinite as our thoughts; and nature provides an infinite variety of scenes to harmonize with all, that no existing susceptibility to pleasure shall be lost, for the want of something external to act upon it, and render it available as a source of happiness. The human countenance is not more varied in its expressions than the face of nature. There are beams in the countenance of morn and even, capable of irradiating into our souls a feeling of intense delight: and it is no marvel that nature should seem, as the poets have described her, to smile upon us in the sunshine that sparkles in the morning dews, and gilds the evening sky, or in the moonlight that reveals to us a new firmament of wonders among the silvery clouds of night. The forms and tints of the clouds produce effects upon the mind that vary with the hour of the day. In the morning there is a feeling of hopefulness attending the spectacle of the constantly increasing splendor of the clouds, commencing with the dark purple tints of dawn, and widening with beautiful radiating undulations, through their whole succession of hues, into perfect day. As we are prepared by the buoyant feelings that come from the spectacle of dawn, to enter with a glad heart upon the duties of the day, we are equally inspired by the spectacle of sunset, with a sentiment of tranquillity, that prepares us for sound and healthful repose.

It is not difficult to understand that if the sun rose clearly into the blue heavens, without any changes except from darkness to light, through all the degrees of twilight, the charms of the morning would be greatly diminished. But nature, that all hearts might be enamored of the morn, has wreathed her temples with dappled crimson, and animated her countenance with those milder glories that so well become the fair daughter of the dawn and the gentle mother of dews. In ancient fable Aurora is a beautiful nymph, who blushes when she first enters into the presence of Day; and the clouds are the fabric with which she veils her features at his approach. But a young person of sensibility needs no such allegories to inspire his mind with a sense of the incomparable beauty and grandeur of the orient at the break of day. It is associated with some of the happiest moments of his life: and the exhilarated feelings, amounting almost to transport, with which we look upon the day-spring in the east, are probably one cause of the tonic and healthful influence of early rising.

Many theories have at different times been advanced to explain the cause of the varying tints of the clouds: but it is at length conceded that they receive and reflect the sun's rays as they are changed by passing through the atmosphere, and that their tints are owing to no peculiar refrangibility of the globules of vapor. As the sun declines and sinks below the horizon, the whole surrounding medium passes through the same series of tints which are seen in the clouds. Were a snowy mountain situated directly before our eyes, we should see the graduated tints of yellow and orange at the summit, deepening into crimson and purple in the middle, and fading into dusky twilight at the base of the mountain. Hence in winter, when the sky is perfectly clear, and the atmosphere purely transparent, the snow that covers the roofs of the houses, and the tops of the hills, is more or less gilded and crimsoned by the rays of the declining sun.

The forms of clouds are not less beautiful or expressive than their colors. While their outlines are sufficiently indefinite for picturesque effects, they often assume a great uniformity in their aggregations. The frost work upon the window panes, on cold winter mornings, exhibits no greater variety of figures than that assumed by the clouds in their distribution over the heavens. Beginning in the form of vapor that rolls its fleecy masses slowly over the plain, resembling, at a distance, sometimes a smooth sheet of water, and at other times a drifted snowbank, the cloud divides itself as it ascends, into heaps of globular figures, that reflect the sunlight from a thousand silvery domes. These, after gradually dissolving, reappear in a host of finely mottled images, resembling the scales of a fish, then marshal themselves into undulating rows like the waves of the sea, and are lastly metamorphosed into a thin gauzy fabric, like crumpled muslin, or in a long drapery of hair-like fringe overspreading the highest regions of the atmosphere.

These different forms of cloud are elevated according to the fineness of their texture and organization, the finer and more complicated fabrics occupying the space above the next in degree. We often observe three layers of clouds separated by sufficient space to receive all the different hues of sunset at the same moment. While the feather clouds, that occupy the greatest elevation, are burnished with a dazzling radiance, the middle layers of dappled cloud will be tipt with crimson, while the violet and indigo hues prevail in the dense unorganized mass that is spread out below. It may be remarked, both of the forms and hues of clouds, that nature permits no harsh contrasts or sudden transitions. The different hues are laid softly one above another, melting into each other like those in the plumage of a bird of paradise. You can never see where one hue terminates and another commences.

It is the same, in a less degree, with their forms, that never for two minutes in succession remain unaltered. They exhibit a pleasing irregularity, and are almost destitute of outlines, so that the imagination is left to carve out of their obscure figures and arrangements, aerial landscapes, bright sunny valleys and waving plains, with villages surrounded by turrets and the pinnacles of mountains.

The imagination is always stimulated by a certain degree of obscurity in the objects of sight and sound as well as of thought. The sublime passages of the poets are often obscure, suggestive of something that produces a well-defined emotion, but no distinct image to the understanding. It is this quality that gives their power to certain remarkable passages in the Hebrew prophets. In a terrestrial landscape, when viewed by daylight, the outlines of objects, except at a distance, are so distinct that we can see and easily describe their forms and character. Distant objects have a dimness of outline, and a misty obscurity, which are favorable to an expression of sublimity. In the darkness of night the forms of trees exhibit the indefinite shapes of clouds, and the imagination is free to indulge its caprices, while, as we pass by them in a journey or a ramble, the eyes are watching their apparent motions and changes of form.

By no scenes in nature, therefore, is the imagination so powerfully excited as by these celestial phenomena, whether we imagine the gates of heaven to be opened beneath the triumphal arches of sunset, or watch the passing of the gloomy precursors of evil days, in the dark irregular masses that deform the sky before a storm. The picturesque effects of clouds are in a great measure attributable to the dubious character of their configurations, giving rise to peculiar fancies, and awakening sentiments suggested only by the loftiest images of poetry. The shadows of passing clouds, as they fall upon the earth, often moving rapidly with the wind, are circumstances that add greatly to their expression. Above all do their motions contribute to the beauty of landscape, when, through some opening in their dense masses while the greater part of the prospect is enveloped in shade, the sun pours a full stream of glory upon a distant grove, village or range of hills.

The system of the universe is attended with so many circumstances that mar our happiness, that the Author of nature has benevolently spread every scene with beauty, that shall serve, by its exhilarating influence, to lift us above the physical evils that surround us, and render us half unmindful of their presence. For this reason beauty is made to spring up, not only in the landscape, in the wilderness and by the wayside, by the seashore and the inland valley, but it is spread in the most gorgeous spectacles upon the heavens, in the infinitely varied forms and arrangements of clouds, and in their equally beautiful lights, shades and colors. Hence the man of cultivated sentiment, who takes pleasure in surveying the beauties of a terrestrial landscape, feels no less delight in contemplating the scenery of the heavens. Every morning, noon and evening afford him scenes always charming and never tiresome, fraught with lessons of divine wisdom and benevolence, never heard from the lips of man, and read only in the works of him who silently shows forth his wonders in the landscape and the firmament.

As the most delightful views of the ocean are obtained when a small part of it is seen through a green recess in a wood, for the same reason, the blue sky is never so beautiful as when seen through the openings of clouds. The emotion produced by any scene whatever is always more intense, when the greater part of the object is hidden, leaving room for the entrance of fanciful images into the mind. Clouds are peculiarly suggestive on account of the ambiguity of their shapes, and their constant changes of form and arrangement. No person can look at their radiant groups, if he possess any liveliness of fancy, without indulging a variety of poetic vagaries. Nothing, indeed, in nature so closely resembles the mysterious operations of thought, ever ceaseless in their motions, and ever varying in their combinations; now passing from a shapeless heap into a finely marshalled band, then dissolving into the pellucid atmosphere, as a series of thoughts will pass away from our memory; then slowly forming themselves again, and recombining in a still more beautiful and dazzling congeries, in another part of the sky; now gloomy, melancholy and formless, then assuming a definite shape, and glowing with the most lovely beams of light and beauty, and lastly, fading into darkness when the sun departs, as the mind for a short period becomes obliterated in sleep.

Perhaps not every one has observed, that in the evening after the hues of the clouds have once faded, they are often reilluminated before darkness comes on. Immediately after sunset, the clouds that surround the western horizon have no remarkable tints, the body of them being of a dark grey, or ash color, having their edges tipt with white. As the sun retires below the hemisphere, the grey portion of the clouds becomes brown or auburn, and the silvery edges of a yellow or golden hue. While the auburn is gradually changing into purple, the yellows deepen into orange and vermilion. Every tint is constantly changing into a deeper one, until the whole sky is decorated with every imaginable color, excepting green and blue. The two last are ingredients in some of the compound hues, but they are never seen in their purity. When these colors have attained their maximum of splendor, they gradually fade away, until the body of each cloud has turned to a dull iron grey, and every gorgeous tint has vanished. The spectator then supposes that all this scene of glory is ended. After a few minutes, however, the clouds begin once more to brighten, the whole picture is gradually re-illuminated and passes through another gradation of more sombre tints, consisting of olive, lilac and bronze, or some of their shades. The second illumination is not so bright or so beautiful as the first; but I have known the light that falls upon the earth to be sensibly increased by this re-illumination, without any diminution of the mass of clouds.

It is difficult to explain the source of those highly pleasurable emotions with which we contemplate the tints of the morning and evening sky. No man can look at them without being convinced that there is intrinsic beauty in colors; though it is the opinion of some philosophers that even the sensations that spring from the sight of colors arise from their expression. There are unnumbered mysterious sources from which our ideas and sentiments are obtained; and the capacity of anything in nature to produce a pleasing or a displeasing thought or sentiment constitutes the expression of that object. As light produces cheerfulness, and darkness gloom, it may be that all the different colors have a similar natural association with some certain mood of mind, and are capable of arousing certain trains of thought which may lead to some definite ideas and images. Nature, who creates nothing in vain, and who by the songs of birds inspires the human heart with the sentiment of adoration, may, by the spectacle of empyrean beauty, lift the mind above a purely sensual philosophy to the contemplation of that infinite wisdom that pervades the universe.

Men of the world may praise the effects of certain medical excitants that serve, by benumbing the outward senses, to exalt the soul into reveries of bliss and untried exercises of thought. But the only truly divine exhilaration proceeds from contemplating the beautiful and sublime scenes of nature as beheld on the face of the earth and the heavens. It is under this vast canopy of celestial splendors, more than in any other situation, that the faculties may become inspired, without madness, and exalted without subsequent depression. I never believe so much in the immortality of the soul as when, at sunset, I look through a long vista of luminous clouds, far down into that mystic region of light in which, we are fain to imagine, are deposited the secrets of the universe. I cannot believe that all this panorama of unimaginable loveliness, which is spread out over earth, sea and sky, is without some moral signification. The blue heavens are the page whereon nature has revealed some pleasant intimations of the mysteries of a more spiritual existence; and no charming vision of heaven and immortality ever entered the human soul, but the Deity responded to it upon the firmament, in letters of gold, ruby and sapphire.

Beverly, *September*, 1854.

ART. III. *Descriptions of New Foreign Pears.*

THE following very full and complete descriptions of a large number of the new or more recently produced pears are by M. De Liron d'Airoles, of Nantes, and are translated for the London *Gardeners' Chronicle*, by Mr. R. Thompson of the London Horticultural Society. Quite a number of them have been described in our pages by M. Desportes, of Angers, and ourselves, and several of them figured, but we copy the descriptions of M. d'Airoles entire, as they in some cases contain additional information, and afford amateurs an opportunity to see in what estimation they are held by the cultivators abroad. In the absence of any foreign standard work on new fruits we must rely on such articles for all our information in regard to new foreign pears :—

Beurré Clairgeau.—The tree is remarkably vigorous, and soon forms a handsome pyramid; succeeds well against a wall with a south or an east aspect; bears abundantly, and at an early age. Fruit variable in form, but generally calebasse-shaped; a superb fruit, weighing sometimes twenty ounces. It gained the first prize of the Horticultural Society of the Seine, in 1851. Its skin is fine, almost entirely covered with patches of reddish russet when gathered; but at its full maturity, which occurs in November and December, it becomes richly colored with yellow and vermilion. Its flesh is fine, white, melting, very juicy, sugary, and perfumed. Raised by Pierre Clairgeau, a gardener at Nantes.

Beurré de Nantes, or Nantais.—Tree vigorous, adapted for a pyramid, or for training against a wall; it soon comes into a bearing state. Fruit large, oblong, of the form of the St. Germain. Skin light green, yellowish when fully ripe. Flesh white, melting, very juicy, and perfumed. Ripens in September. One of the most handsome and delicious of the new pears. It was raised by Francois Maisonneuve, a horticulturist at Nantes.

Beurré Delfosse.—Tree vigorous, suitable for a pyramid or standard. Fruit middle sized, roundish. Skin yellowish brown, slightly tinged with red next the sun. Flesh white, fine, buttery, and melting; very juicy and sugary, with a delicious, perfumed flavor, somewhat resembling that of the Passe Colmar. Becomes fit for use in Belgium in December and January. Raised by M. Gregoire, of Jodoigne, Belgium.

Bergamotte Hambourg.—Tree vigorous, forms a handsome pyramid, and is also adapted for a standard; an abundant bearer. Fruit large, bergamot-shaped, from three to three and a half inches in diameter. Skin rough, green, changing to citron yellow when ripe, dotted with brown, and tinged with red next the sun. Flesh white, very fine, somewhat buttery, juice abundant, sugary, perfumed like the Rousselets and Bergamots. An excellent fruit, ripening, in Belgium, in the first fortnight of October. Raised by M. Bivort.

Duc d' Orleans.—The original tree has a magnificent pyramidal form. Fruit middle-sized, or tolerably large, obtuse-pyramidal, of a fine golden yellow, profusely sprinkled with reddish brown and dark specks. Stalk slender, woody, and about an inch and a quarter in length. Flesh white, fine, melting, very juicy and sugary, with a vinous, perfumed flavor. Season, November and December. Raised by M. Alexandre Bivort, and bore, for the first time, in 1847.

Beurré Six.—Tree vigorous and fertile, but requires to be worked on the pear stock, and grown against a wall. It is not adapted for pyramidal training. Fruit large, pyriform. Skin smooth, light green, dotted with deep green and brown. Flesh white, very fine, melting, buttery and sugary, with a delicious perfume flavor. Its season of maturity is November and December, in Belgium. Raised by M. Six, nurseryman at Courtray.

*Duchesse de Berry.**—This is naturally classed among the Doyennes. In some catalogues it is confounded with the Doyenne d'Ete, from which, however, it is very different. Tree vigorous and very productive. Fruit middle sized, somewhat larger than the Doyenne d'Ete, or Doyenne de Juillet. Skin smooth, pale green, dotted with brown. Stalk short and thick. Flesh white, crisp, juicy, and sugary. Ripens, at Nantes, between the 15th of August and the 15th of September. This variety was discovered by M. Bruneau, nurseryman at Nantes. Among a number of seedling trees, at a place called the Barriere de Fer, commune de Saint-Herblain, he observed two trees, the fruits of which appeared to possess merit; to one of them he gave the name of Duchesse de Berry, and to the other that of Saint Herblain d'Hiver, and introduced them into his nursery in 1827.

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* This should be called Duchesse de Berry d'Ete, to distinguish it from another pear lately sold under the name of Duchesse de Berry, and which has proved to be the Uvedale St. Germain.

Saint Herblain d'Hiver.—The tree does not succeed well on the quince stock, but on the pear stock it is tolerably vigorous, and is suitable for standards or pyramids. The fruit bears considerable resemblance to the Easter Beurré, from which it has probably been raised, and at first sight might be mistaken for it. It is of medium size, or rather small when the tree is heavily loaded. Skin smooth, green, sprinkled with small brown dots. Stalk short, deep brown. Flesh fine, white, juicy, and sugary. Although the tree is not so vigorous as many others, yet it appears deserving of cultivation, as the fruit keeps till late in the season.

Marie-Anne de Nancy.—Tree moderately vigorous, and likely to prove a good bearer. Fruit middle sized, turbinate, about nine inches in circumference. Skin smooth, green, streaked and speckled with russet, becoming yellowish when fit for use. Stalk scarcely half an inch in length, clear brown, thick, and fleshy. Flesh white, very melting, and buttery, with abundance of sugary, vinous juice. Ripe in September and October. From seed by Van Mons.

Docteur Trosseau.—The tree bore for the first time in 1848. It is entirely destitute of thorns, which is rarely the case with pear trees that have recently been raised from seed. Fruit large, pyriform, broad near the eye, and contracted near the stalk. It is four inches in height and three inches in diameter. Stalk strong and woody, about an inch in length, sunk at its insertion. Skin green, spotted with red, and sprinkled with gray dots. Flesh fine, white, melting, buttery, with abundance of sugary, perfumed juice. Ripe in November and December. Raised by M. Alexandre Bivort.

Beurré Bretonneau.—Tree vigorous, an abundant bearer, adapted for a standard or pyramid. Fruit as yet variable in form, but generally it is long, pyriform, contracted near the stalk end, four inches in length, and about three inches in diameter at the widest part. Skin rough, pale green, changing to golden yellow at maturity; the side next the sun is reddish brown, much dotted and freckled with distinct russet specks. Flesh fine, yellowish white, buttery, half melting, sugary, vinous, and perfumed. Keeps till May or June. Named in compliment to Dr. Bretonneau, of Tours, in 1846, by Major Esperen.

Poire de Tongres.—The tree is a very strong grower, and succeeds better on the pear stock than on the quince. It is naturally pyramidal. Fruit very large, obovate, four and a half inches in length, and three and a half inches in diameter. Stalk three fourths of an inch in length, obliquely inserted. The surface of the fruit is uneven. Skin bronze colored, changing to a deep brownish yellow when fit for use; the side next the sun is streaked with red. Flesh fine, white, melting, juicy, sugary, vinous, and agreeably perfumed. Season, middle of October. Raised by M. Durandeau, at the village of Tongres.

Josephine de Malines.—Tree vigorous, and a good bearer, forming a handsome pyramid, and may be worked either on the pear or on the quince stock, and it may be planted against an east or west aspect. Fruit small from a standard, middle sized from a wall, obovate. Flesh fine, buttery, juicy, sugary, and perfumed. Season, January to March. Raised by Major Esperen of Mechlin.

La Juive.—The tree is handsome and vigorous, suitable for forming a pyramid. Fruit middle sized, turbinate. Stalk nearly an inch in length, inserted in a cavity. Skin smooth, yellowish green, marbled with green and brown, red next the sun. Flesh very fine, melting, sugary, and highly perfumed. Season, November. Bore for the first time in 1843. This first rate pear was obtained by Major Esperen.

Jules Bivort.—The tree is of moderate vigor, but very productive. Fruit large, obovate, about three and a half inches in height, and three inches in diameter. Skin dull green, becoming yellow when fit for use, dotted with brown, and slightly tinged with red next the sun. Flesh yellowish white, fine, melting, half buttery, with abundance of sugary, vinous, much perfumed juice. Fit for use about the middle of November. Raised by M. Alexandre Bivort, and bore for the first time in 1847.

Conseiller de la Cour.—Tree very vigorous and an abundant bearer, well adapted for a pyramid, the form which it naturally takes. Fruit very large, obovate, usually about four inches and three fourths in height, and twelve inches in circumference. Stalk slender, woody, about three fourths of an inch or from that to an inch in length. Eye sunk and open, frequently without any remaining segments of the calyx. Skin pale green, dotted with russet, with which it is more closely covered near the stalk. Flesh white, fine, juicy, half buttery, with abundance of sugary and agreeably perfumed juice. Season, end of October and November. One of Van Mons's seedlings, [and, according to the *Annales de Pomologie,* it was named from the circumstance of his son being Conseiller a la Cour d'Appel, of Brussels. The tree bore for the first time about 1840.]

Marie Parent.—Tree moderately vigorous; it first produced fruit in 1851. Fruit large, pyriform, with the surface uneven. Stalk oblique, three fourths of an inch in length, woody, and of a brown color. Eye surrounded with folds in a rather large cavity. Skin green, changing to a golden yellow when the fruit becomes fit for use. Flesh white, very fine, melting, somewhat buttery, very juicy, sugary, and deliciously perfumed. Ripens in October. Raised by M. Bivort. [This sort is figured and described in the Annales de Pomologie Belge, Vol. I, p. 15. M. Bivort states that it was raised by him in 1844, and that the seed was taken from fruit gathered that year at Louvain, from a tree among the varieties resulting from the last generation of seedlings raised by Prof. Van Mons, named in compliment to Madame Parent, wife of the editor of the Annales de Pomologie.]

Bonne de la Chapelle.—The tree is of moderate vigor, and apparently very productive. Fruit middle sized, roundish, or rather bergamot-shaped, measuring two and one third inches from base to top, and two and three fourths inches across. Stalk slender, and about an inch in length. Skin light green, glossy, irregularly sprinkled with small brown dots. Flesh white, crisp, juicy, sugary, and perfumed. Season, end of September. This sort was found by M. Jacques Jalais, gardener at Nantes, in the wood of La Chapelle-sur-Erdre, near Nantes, in 1845.

Beurré de Wetteren.—Tree vigorous, very thorny, suitable for a pyramid. It bore for the first time in 1847. Fruit middle sized, turbinate. Stalk about an inch in length, rather thick, slightly curved, with some small plaits around its insertion. Eye sunk in a wide, evenly-formed cavity. Skin completely covered with russet, and slightly colored next the sun. Flesh fine, yellowish white, half melting, buttery, with an abundant, sugary, agreeably perfumed, musky juice. [In the Annales de Pomologie, where this sort is figured and described, (p. 59), it is stated to have been discovered by M. Louis Berkmans, in his garden at Heyst-op-den-Berg, among a number of wild pear trees, which were partly from his own sowings, and partly from those of the late Major Esperen of Mechlin.]

Bon Gustave.—Tree vigorous, suitable for a pyramid. Fruit middle sized, three and a half inches in length, and twelve inches in circumference, of a regular pyriform shape. Stalk nearly an inch in length, thick and woody. Eye shallow and open. Ground color of the skin light green; but nearly the whole surface is russeted. Flesh white, fine, buttery, with a sugary, perfumed juice. A fruit of first rate quality, ripening in December and January.

Poire Prince Albert.—Tree vigorous, and succeeds both on the pear and quince stock. It naturally takes the pyramidal form. Fruit middle sized, pyriform, three and a half inches in length, and two inches and three quarters in diameter. Stalk about an inch in length. Eye small, open, placed in a shallow, evenly rounded cavity. Skin very thick, smooth; ground color pale green, becoming yellowish when ripe, sometimes slightly colored next the sun; it is tinged with red near the stalk, elsewhere distinctly marked with reddish spots and sprinkled with black dots. Flesh yellowish white, fine, melting, with a rich sugary flavor. Season, February and March. This delicious fruit was obtained by M. Bivort, from one of the trees raised from seed by Dr. Van Mons, and which fruited for the first time in 1848.

Van Marum.—Tree vigorous, and an abundant bearer, suitable for a pyramid, and succeeds on the pear and quince stocks equally well. On account of the size of the fruit, we have thought the tree worthy of trial against a wall. The size of the fruit is enormous, seven inches in length, and twelve inches in circumference, calebasse shaped. Skin bronze colored, brighter where exposed to the sun. Stalk very short, thick, fleshy, but sometimes it is long and slender; it is inserted in a small, narrow cavity. Eye open, in a wide spreading hollow, surrounded with small plaits. Flesh white, coarse, fibrous, breaking, with but little juice, sweet and perfumed. Season, October. This superb fruit was obtained by Van Mons in 1820, and was named by him in compliment to the eminent Dutch chemist, Van Marum.

Desire Cornelis.—Tree pyramidal, vigorous, productive, thorny, its branches extending almost horizontally. Fruit large, nearly four inches in height and three and a half in diameter. Stalk rather more than an inch in length, somewhat oblique. Eye open, shallow, surrounded with small projections. Skin rough, pale green, becoming yellowish as the fruit approaches maturity, spotted with light brown, slightly tinged with red next the sun. Flesh very fine, white, buttery, melting, with abundance of sugary perfumed juice. Season, beginning of September. Raised by M. Bivort.

Poire Deux Sœurs.—Tree vigorous, pyramidal, thorny, and an abundant bearer. Fruit large, pyramidal, long and tapering to a point, four inches and three quarters in length, and half as much in diameter, ribbed towards the eye. Stalk upwards of an inch in length, of moderate thickness. Eye slightly sunken. Skin pale green, speckled with brown, interspersed with black dots. Flesh fine, yellowish green, buttery, moderately juicy, very sugary, leaving, after tasting, a decided nut or almond flavor. Season, November. The tree was found in a garden at Mechlin, and named by Major Esperen, but at what period we do not know.

Bergamotte Esperen.—Tree vigorous, somewhat thorny. Fruit middle sized, bergamot-shaped. Stalk nearly an inch in length, slightly curved. Eye in a shallow depression, surrounded with small knobby wrinkles. Skin rough, green, becoming yellowish at maturity. Flesh white, tinged with pale rose color, very fine, melting; juice abundant, sugary, and agreeably perfumed. Season, March and April. This delicious fruit is one of the many seedlings raised by Major Esperen.

Alexandrine Douillard.—Tree vigorous, and may be grown as a standard, or as a pyramid; the latter form is, however, most suitable for it. The fruit is handsome, of the size of a Beurré d'Amanlis; stalk long, skin yellowish gray, flesh fine, white, very juicy and sugary. Season, November and December. Raised from seed by M. Douillard, architect, Nantes, and fruited for the first time in 1849.

Duc de Brabant.—Tree vigorous and productive; may be grown either as a standard or as a pyramid. Fruit large, about three and three quarters inches in length and six inches in circumference at the widest part, of a pyriform shape, tapering much towards the stalk; the latter is about one and a half inch in length, slightly curved; eye open, in a slight depression; skin smooth, pale green, dotted and speckled with brown, and acquiring a somewhat yellowish tinge as the fruit approaches maturity, which it usually attains in October and November. This is one of Van Mons's seedlings, and is supposed to have been first fruited in 1827.

Willermoz.—The tree makes a fine growth, and quickly forms a handsome pyramid. Fruit large, pyriform. Stalk short. Eye open, in a small cavity, surrounded with some folds. Skin smooth, pale green, yellowish when the fruit is ripe, tinged with red and finely marked with yellowish brown dots. Flesh white, fine, melting, juicy, sugary, with a slight musky perfume. Season, October and November. Obtained by M. Bivort, and named by him in compliment to M. Willermoz.

Henri Bivort.—The tree grows with excessive vigor on the pear stock; less so, of course on the quince. It pushes so strongly that it is more advantageous to propagate it by grafting rather than by budding. Fruit three and a half inches in length, and nearly as much in diameter; obtuse-pyramidal. Stalk from one to one and a half inch in length, oblique. Eye open, irregular, in a slight depression. Skin smooth, pale green, speckled with brown. Flesh yellowish white, fine, half buttery, very juicy and melting, with a perfumed flavor. Ripens in the first fortnight of September. Raised by M. A. Bivort.

Beurré Benner.—The tree assumes a handsome pyramidal form, suitable for a standard. Fruit small, turbinate; stalk about an inch in length, thick; eye open in an irregularly formed knobby cavity; skin smooth, yellow, strongly marked with streaks and patches of reddish brown next the sun; flesh melting, fine, buttery, with abundance of sugary perfumed juice. Season January and February. Obtained by M. Bivort, and fruited for the first time in 1846.

Zephirin Gregoire.—Tree vigorous, and an abundant bearer, suitable for a pyramid or standard, or it may be planted against a wall with either an east or west aspect. It is better worked on the quince than on the pear stock. Fruit middle-sized or small, about three inches in length and two and three quarters inches in diameter, obovate. Stalk nearly an inch in length, obliquely inserted; eye open, in a shallow cavity; skin smooth, green, dotted with brown, becoming yellow as the fruit ripens; flesh greenish white, fine, melting, buttery, with abundance of sugary perfumed juice. Season, November till February. Obtained by M. Gregoire, at Jodoigne, and is one of the most delicious pears we know.

Triomphe de Jodoigne.—Tree vigorous, and may be worked either on the pear or quince stock, and trained as a pyramid. Fruit large, obovate, about three and a half inches in length, and as much in diameter at the widest part. Stalk short, thick, inserted in a small cavity, near which the fruit forms some strong projections. Eye large, deeply sunk in a ribbed cavity. Skin fine, shining, pale green, marbled with brown, especially near the stalk and eye ; it changes to citron yellow when the fruit is mature. Flesh white, buttery, very melting, and juicy, with an agreeable perfume. Season, November and December. Obtained in 1843, by M. Simon Bouvier of Jodoigne, Belgium.

Beurré Comice de Toulon.—Tree vigorous and productive. We are of opinion that it is suitable for a pyramid or a wall; but we have only had an opportunity of judging from the growth of some young trees in our nursery. A superb fruit, measuring from five to five and a half inches in length, and ten and a half inches in circumference. Oblong-obovate, terminating at the stalk with a projection, somewhat resembling a bird's head, of which the stalk, one and a half inch in length, appears like the beak. Eye open, in a deep, moderately wide cavity. Skin fine, smooth and glossy, pale yellow, sprinkled with red dots, which are deeply colored next the sun; the shaded side and round the eye is freckled with olive brown. Flesh fine, white, melting and juicy. Season, November and December. Raised by M. Flory, a horticulturist at La Valette.

Art. IV. *Descriptions and Engravings of Select Varieties of Pears.* By the Editor.

We continue our descriptions of pears from a previous number, (p. 140,) and present six American varieties, some of which are of the highest reputation, and all well worthy of addition to collections of any extent. Among a small number of trees some of them might not be so desirable as older and well known sorts; but as they are all natives, and have the hardihood and vigor of our American seedlings, we give a full description of them.

170. ADAMS.

This beautiful pear, *(fig.* 21,*)* originated in Waltham, Mass., in the garden of Dr. H. Adams, and first fruited only seven or eight years ago. We first saw specimens from the original tree in 1848, when first exhibited by Dr. Adams. We then thought it a most superior pear. Since that time we have had it in full bearing in our collection, and it fully sustains the impression we first formed of its fine qualities.

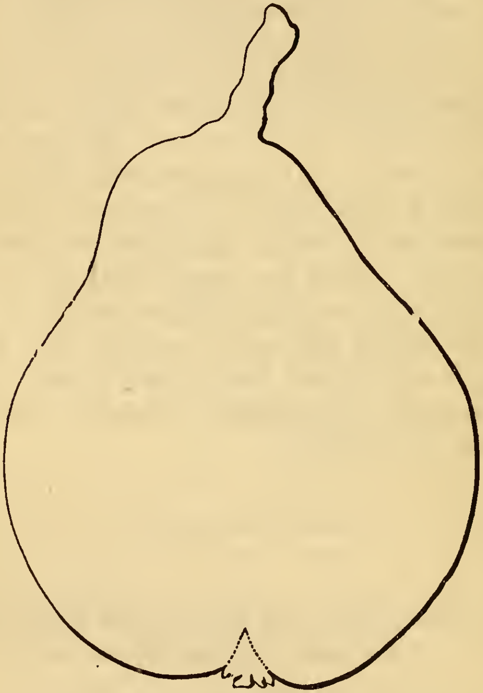

Fig 21. *The Adams Pear.*

Desirous of giving an account of its origin, we requested Dr. Adams to send us any particulars in regard to it, and the following is his statement:—

"DEAR SIR:—In reply to your enquiries relative to a seedling pear, which was recently produced in my garden, I will say that it was grown from the fruit of a Seckel pear tree, which stood near a Bartlett. The pear producing the tree was planted in the autumn of 1836, and it first bore fruit in 1848. It is a vigorous growing tree, and an abundant and constant bearer; at this time it is very full of fruit, which in consequence of the drought, is not more than half its usual size. I have, at two different times, sent specimens of the fruit for exhibition to the Massachusetts Horticultural Society, with a letter to the President giving a description of the fruit and its origin, but as I have heard nothing from it I concluded the pear was not thought to be worth cultivation. Several gentlemen, however, who saw the fruit and subsequently tasted it, have sent to me for scions, which have been very freely distributed. The pear is in eating a little later than the Bartlett, which it somewhat resembles both in size and form."

Such is the origin of the Adams pear, which name we gave to it in honor of the originator. It is undoubtedly the result of an accidental cross of the Bartlett with the Seckel; for the tree in its growth and habit resembles the Seckel, while the leaves and fruit resemble the Bartlett. It also, in a degree, seems to combine the flavor of the two, being more brisk and sprightly than the Bartlett, with much of the rich aroma of the Seckel. We have now had it in bearing three years, and believe it will prove one of our best native varieties. Wood dark colored like the Seckel, compact in its habit, but with leaves folded inwards like the Bartlett. It ripens just as the Bartlett is going off, and keeps well for some time. We have not tried it on the quince.

Size, large, about three inches long and two and a half in diameter; *Form*, pyramidal, full at the crown, contracted in the middle, and obtuse at the stem, with an uneven surface, somewhat like the Bartlett; *Skin*, fair, smooth, deep yellow, tinged with pale red in the sun, and dotted all over with russet specks, slightly russeted at the base of the stem; *Stem*, short, about half an inch long, stout, wrinkled, fleshy at the base, and obliquely inserted without any cavity; *Eye*, small, closed, and set even with the crown, surrounded with a few small uneven ribs; segments of the calyx, short; *Flesh*, white, fine, melting and very juicy; *Flavor*, rich, brisk, vinous, perfumed and excellent; *Core,* small; *Seeds,* medium size, brown. Ripe in September and beginning of October.

171. Tea. *Mag. of Hort.*, XVI.

The Tea pear, *(fig. 22,)* we first saw in 1850, when some very beautiful specimens were exhibited by Mr. S. D. Pardee, of New Haven, at the fair of the American Institute, N. Y. We at first thought it to be the White Doyenné, so much did the specimens resemble that fine pear both in looks and quality; but we found, on tasting it, that it was a distinct and very excellent pear. Last season another trial of it from our own collection confirmed the opinion which we have expressed of it in our previous volumes.

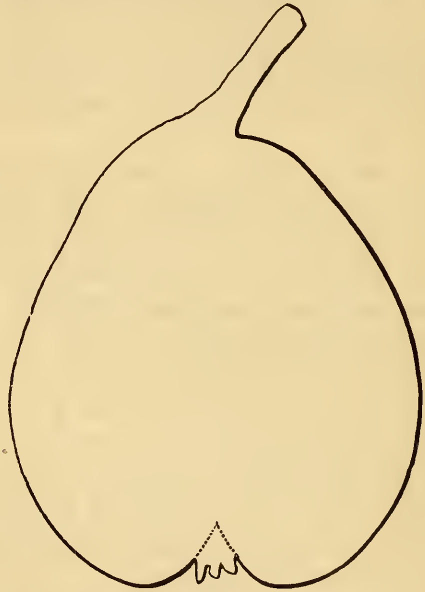

Fig. 22. The Tea Pear.

The origin of the Tea pear is unknown to us; we received our scions of Mr. Pardee, and presume he can give some account of its history, &c. If we recollect rightly the tree sprung up accidentally in a garden in New Haven, and when it begun to bear, the fruit was greatly admired, and attracted the attention of cultivators who soon introduced it to notice.

The tree is a vigorous grower, with very bright yellow wood, and with rich deep green foliage. We do not know how it succeeds on the quince.

Size, medium, about three inches long and two and a half in diameter; *Form*, obtuse pyramidal, full and rounded at the crown, narrowing to the stem; *Skin*, fair, smooth, yellowish green, becoming pale yellow when mature, with a slight tinge of blush on the sunny side, and dotted with numerous russet specks; *Stem*, rather short, about half an inch long, stout, little fleshy at the base, and obliquely inserted without any cavity on one side of a slight projection; *Eye*, medium size, open, and slightly sunk in a very small regular basin; segments of the calyx, medium length, stiff, projecting; *Flesh*, yellowish white, little coarse, melting and juicy; *Flavor*, vinous, brisk and excellent, with a slight perfume; *Core*, medium size; *Seeds*, small, obovate, brown. Ripe in September.

172. MUSKINGUM. *Mag. of Hort.*

The Muskingum pear, (*fig.* 23,) has been recently introduced into the vicinity of Boston, and thus far has only fruited in three or four collections. It is, however, a good sized fruit, ripening about the twenty-fifth of August, very fair in appearance, and of good quality; not so high flavored as the Tyson or Boston, but uniformly handsome. The tree is a good grower, hardy and productive, which, added to its other qualities, make it a desirable variety, particularly for marketing.

The Muskingum is said to be a native of Ohio, though we have been unable to find any authentic account of its origin. Gard. Greene, Esq., of Norwich, Conn., sent us some fine specimens of this pear in 1850, and in a note accompanying them he writes as follows:—

"I send you a small box of Muskingum pears. The fruit is sparingly cultivated at Lebanon, a few miles from us. The opinion is that it was brought from some part of Ohio, say Marietta. At the same time, local appearances have led me to think it a seedling, native upon the farm from which it has been spread. It is a most abundant bearer, though somewhat inclined to alternate years like the Baldwin apple."

If the tree in Connecticut is an old one the conclusion we should arrive at would be that grafts were carried west by Putnam, at the same time the eastern apples were carried hence, and that it is not a seedling of Ohio as has been supposed. An examination of the trees from which Mr. Greene gathered his fruit would decide this.

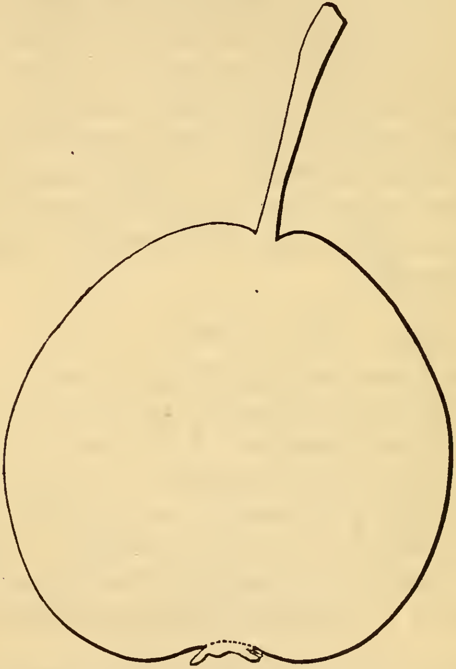

Fig. 23. The Muskingum Pear.

Size, medium, about two and a half inches long and two and a half in diameter; *Form*, roundish, largest in the middle, obtuse at the stem; *Skin*, fair, smooth, yellowish green, slightly russeted around the base of the stem and eye, and dotted with numerous conspicuous russet specks; *Stem*, long, about one and a quarter inches in length, rather slender, curved, and obliquely inserted in a small contracted cavity; *Eye*, medium size, open, and scarcely depressed; segments of the calyx, short, connected; *Flesh*, white, rather coarse, melting and juicy ; *Flavor*, sprightly, vinous, pleasantly perfumed and excellent ; *Core*, medium size ; *Seeds*, medium size, long and pointed. Ripe the last of August.

173. **Harvard.** Prince's *Pom. Manual*, Vol. I.
L'Epergne,
Cambridge Sugar.

The Harvard pear, (*fig.* 24,) is a native of Cambridge, Mass., where the original tree is now growing, and was named in compliment to the founder of Harvard University. Some years ago, when there were not ten acknowledged American pears of good quality, this was somewhat extensively cultivated, and was one of the principal sorts brought to Boston market, as it is even now, next to the Bartlett, the only good kind to be found in any quantity, early in September.

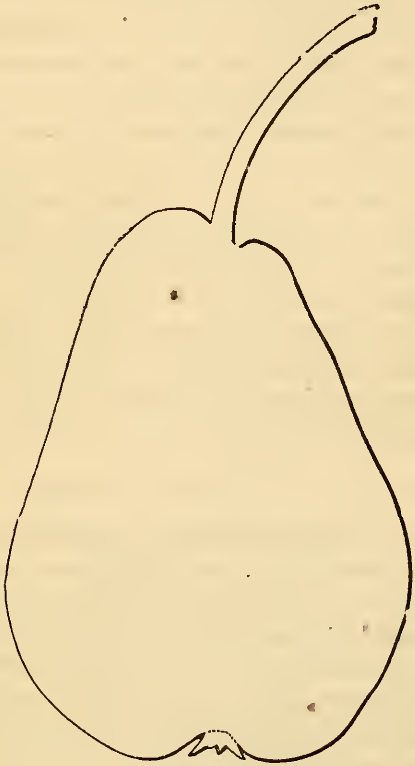

Fig. 24. The Harvard Pear.

The Harvard is a very vigorous growing tree, so much so that next to the Dix it is one of the longest in coming into bearing, but when it once attains to a fruiting state, it produces most abundantly, the trees being loaded. When picked early and ripened off in the house it is almost as spicy and rich as the Seckel, but when left on the tree too long it rots at the core and is an indifferent fruit.

So far as we have any knowledge it does not do well upon the quince. The tree is upright in habit, making very stout annual shoots; wood, dark brownish red.

Size, medium, about three inches long, and two and a half diameter; *Form*, obtuse pyramidal, largest near the crown, contracted in the middle, ending obtusely at the stem; *Skin*, fair, smooth, green, becoming yellowish when mature, broadly shaded with a dull bronzy red on the sunny side, and thickly dotted with greyish white specks; *Stem*, long, about one and a quarter inches in length, rather stout, little curved, and inserted with scarcely a perceptible depression; *Eye*, small, open, and slightly depressed in a small puckered basin; segments of the calyx, broad, short and partially reflexed; *Flesh*, greenish yellow, melting and juicy; *Flavor*, rich, sugary, highly perfumed and good; *Core*, rather large; *Seeds*, medium size. Ripe in September.

174. WILKINSON. *N. E. Farmer*, Vol. IX.

The Wilkinson, *(fig. 25,)* though one of the oldest of our fine American pears, is yet one of the least cultivated. It was first introduced to the notice of cultivators generally by the exhibition of fine specimens of the fruit before the Massachusetts Horticultural Society, in October, 1829, who gave it the name of the Wilkinson, in compliment to Mr. Jeremiah Wilkinson, the owner of the farm on which the tree originated and was then growing.

Mr. Stephen H. Smith, of Providence, R. I., forwarded the fruit to the late Samuel Downer, and with it a letter giving a brief account of its origin. From this we learn "that it originated in the town of Cumberland, R. I., on the farm of Mr. Wilkinson, brother of the noted Jemima Wilkinson, and the place of her nativity, and is supposed to be an accidental cross between the St. Germain and St. Michael, both of which had been long grown in the vicinity. The tree is healthy and a great bearer,—the fruit when fully ripe is yellow with a blush next the sun,—flesh very melting and highly sugared, flavor brisk and resembling the St. Germain. It keeps through the month of November."

Such is Mr. Smith's statement, and the Massachusetts Horticultural Society, with Mr. Manning as chairman of the fruit committee, pronounced it "a valuable new fruit," and ordered a drawing of it made for the Society; and now, nearly twenty-four years afterwards, the Wilkinson is less known than many new varieties. It is really a very delicious pear and wants more attention. We have occasionally eaten it when we thought there was nothing better, and we should like to see the same pains taken to grow it in as good condition as many foreign sorts, which after all have proved quite worthless.

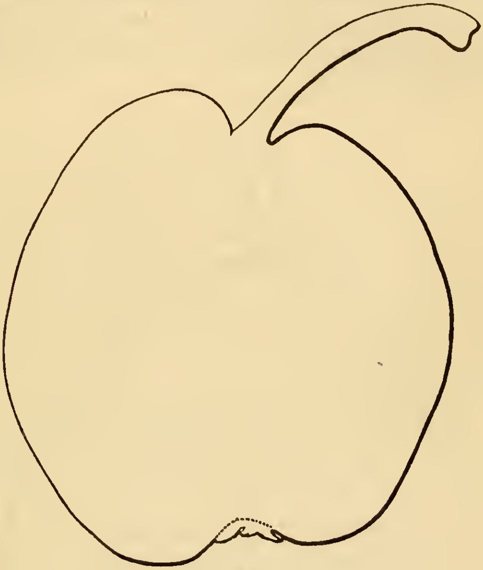

Fig. 25. The Wilkinson Pear.

Size, medium, about two and three quarters inches long and two and a half in diameter; *Form*, ovate, obtuse at the ends, more swollen on one side than the other, largest in the middle, rounding off to the crown and stem; *Skin*, fair, smooth, pale yellow at maturity, thickly dotted with large reddish russet specks, and often handsomely tinged with red on the sunny side; *Stem*, long, about one and a quarter inches in length, stout, curved, knobby and obliquely inserted in a large, open, moderately deep cavity; *Eye*, medium size, open, and little depressed in a medium sized, somewhat ribbed basin; segments of the calyx, short, reflexed; *Flesh*, yellowish white, coarse, melting and very juicy; *Flavor*, sugary and delicious, with a peculiarly rich aroma; *Core*, large, little gritty; *Seeds*, large, full, obovate and sharply pointed. Ripe in October and November.

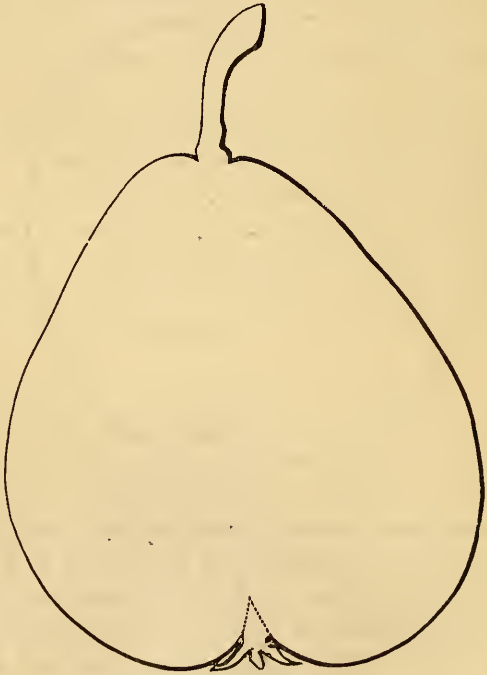

Fig. 26. *The Abbott Pear.*

175. Abbott. *Horticulturist.*

The Abbott, (*fig.* 26,) is another of the Rhode Island pears, which we have already noticed, and resembles in its general character the Buffum, Westcott and other sorts. It is however more beautiful than either of them, and of larger size, resembling somewhat the Andrews, with the same bright mottled cheek and smooth oily skin.

The Abbott pear originated in Providence, R. I., from a seed planted by Mrs. Thomas Abbott, in honor of whom it has been named. It first fruited, we believe, in 1845 or 1846, when it was exhibited before the Rhode Island Horticultural Society. Since then we have repeatedly seen it, and had it in bearing in our collection this year. Its beauty, fair size, and excellent quality, combined with a vigorous and productive tree, will class it among our best American pears. The tree is quite distinct in its character, having small leaves and rather slender wood of a dark reddish shade. It makes a good pyramid on the pear stock.

Size, medium, two and three quarters inches long, and two and a half in diameter; *Form*, obovate, regular, rather full at the crown, tapering to the stem end, which is obtuse; *Skin*, fair, smooth, deep green, becoming yellowish when mature, with a fine bright blush on the sunny side, and thickly dotted with conspicuous rusety specks; *Stem*, short, about half an inch long, moderately stout, curved, slightly fleshy at the base, and inserted without any very perceptible cavity on the obtuse end; *Eye*, medium size, open, and moderately sunk in a large, rather broad open basin; segments of the calyx, long, narrow, reflexed; *Flesh*, yellowish white, little coarse, melting and juicy; *Flavor*, rich, sweet and sprightly, without much perfume; *Core*, rather large; *Seeds*, large, brown. Ripe in September and October.

ART. V. *Pomological Gossip.*

THE CONCORD GRAPE.—This splendid grape was exhibited, at the late show of the Massachusetts Horticultural Society, in the finest condition from Mr. Bull's garden. Twenty-five bunches from one vine were shown, the largest of which measured SEVEN AND A HALF INCHES LONG AND SIX AND A HALF

BROAD. It was the most attractive feature of the exhibition; the specimens were finely ripened, of a very dark color, and covered with the deepest and richest bloom. The Pomological Convention brought hither gentlemen from all parts of the country, several of whom visited Mr. Bull's garden in Concord,—among others, Mr. C. Downing of Newburgh, N. Y., and Mr. Hooker of Rochester. They expressed themselves delighted as well as surprised at the magnificent specimens on Mr. Bull's vines. After all the attempts made to traduce this variety, Mr. Bull must feel highly pleased at the triumphant manner in which it has sustained its reputation.

ALLEN'S HYBRID GRAPE.—Mr. J. F. Allen of Salem, the well known grape cultivator, has succeeded in obtaining seedlings from the Isabella, impregnated with the foreign grape; and to one of these he has given the name of Allen's Hybrid. It is a white grape, similar in appearance to the Sweetwater, and nearly or quite as good as that old sort. He has not yet fruited it in the open air, the original vine being planted out in his cold grapery, but there appears to be but little doubt it will prove entirely hardy and bear well. We have seen the specimens, but have not yet tasted them. The foliage is quite distinct, and plainly shows the completeness of the cross between the foreign and native grape. At another time we shall give some further notice of this variety, and we trust an account of its origin and other particulars, by Mr. Allen himself, as no subject could be of more interest to all who are interested in the culture of the vine. Mr. Allen's seedling is the first one we have ever yet known which could be shown to be a perfect cross between the American grape (V. æstivàlis) and the foreign one, (V. vinífera), two quite distinct and well marked species. It will undoubtedly prove a valuable acquisition.

MULCHING STRAWBERRIES WITH TAN.—We pride ourselves somewhat upon the few errors which occur in the pages of our Magazine, filled as they are with botanical, French, and other names not generally familiar to typographers. Formerly we made it a rule to correct all errors in the number, or numbers, succeeding that in which they were made. But for some years we have adopted another rule, that is, never to correct errors, as the intelligence and good sense of a majority of our readers would detect them in most cases. It happens that by some oversight of the proof reader, a rather blundering mistake occurred in our August number, in which we were made to say, "the late Mr. Downing considered mulching *tan* with *strawberries*," &c. The Editor of the *Horticulturist*, who reads our Magazine, we judge, very carefully, detected this, and undoubtedly rather short for good subjects for an article, attacks us—not so maliciously we imagine as some other people we could mention have in other matters—and forthwith seriously announces that we have "overtasked our mental faculties on the strawberry question, and worked ourselves into a very precarious condition." This may possibly be true, and our readers must prepare themselves to hear of our total incapacity to cater for them much longer. However, there will be one smart man left, for, after such an effort of the Editor of the *Horticulturist*, there is not much danger of his mental capacities being greatly injured by use.

FINE PEARS AT THE ANNUAL EXHIBITION OF THE MASSACHUSETTS HORT. SOCIETY FOR 1854.—The exhibition just closed, though considerably below that of 1853, both in the quantity and quality of the pears, was, nevertheless, a very fine exhibition for so unfavorable a season. Had the drought been less severe, we do not doubt the specimens would have been even better than last year. In order to give our pomological friends some idea of what are our best, or, at least, most generally cultivated pears, we give the names of the kinds in those collections which took some of the leading prizes, as will be seen by the report in another page:—

From M. P. Wilder, 30 varieties, 12 specimens each, as follows: Beurré Diel, B. d'Anjou, B. Sentin, (baking), Belle Lucrative, Belle Epine Dumas, Nouveau Poiteau, C. Van Hooghten, White Doyenné, Doyenné Boussock, Dunmore, Catillac, (baking,) Le Curé, Andrews, Louise Bonne of Jersey, Bartlett, Urbaniste, Duchess, W. Nelis, Marie Louise, Lawrence, Flemish Beauty, Golden B. of Bilboa, Fred. of Wurtemburg, Belle et Bonne, Columbia, V. M. Leon le Clerc, Abbott, Theodore Van Mons, Counselleur Ranwez, and Tarquin de Pyrenees.

From Messrs. Hovey & Co., 30 varieties, 12 specimens of each, viz.:—Beurrè Sterkman, B. Diel, B. d'Anjou, B. Bosc, B. Gris d'Hiver, Belle Lucrative, Brown Beurré, Belle Epine Dumas, Bartlett, F. Beauty, Grand Soleil, Grey Doyenné, White Doyenné, Marie Louise, Adams, Seckel, Louise Bonne of Jersey, Le Curé, Swan's Orange, Duchesse, Urbaniste, Glout Morceau, Dunmore, Fred. of Wurtemburg, St. Michael Archange, V. M. Leon le Clerc, St. Dorothée, Dundas, Althorpe Crassane and Belle et Bonne.

From Jos. Stickney, 12 varieties, 12 specimens each, viz.: Louise Bonne of Jersey, Beurré Langelier, B. Diel, B. Bosc, Duchesse, Bartlett, Dix, W. Nelis, Urbaniste, Flemish Beauty, Paradise of Autumn, and Jalousie de Fontenay.

From Jos. Richardson, 12 varieties, 12 specimens each: Louise Bonne of Jersey, Urbaniste, Le Curé, Beurré Gris d'Hiver, B. d'Anjou, Bartlett, White Doyenné, Gray Doyennè, Andrews, Belle Lucrative, Flemish Beauty, and Le Curé.

From W. R. Austin, 12 varieties, 12 specimens each: Beurré Easter, B. Diel, B. d'Anjou, Duchess, Passe Colmar, V. M. Leon le Clerc, Bartlett, Andrews, Glout Morceau, Louise Bonne of Jersey, White Doyenné, and Le Curé.

ART. VI. *Notice of a large Isabella Grape Vine, in the Garden of Mr. G. B. Cutter, Weston, Mass.* By W. W. WHEILDON, ESQ.

WE visited Mr. Cutter's residence in Weston, on Wednesday, September 21st, 1854. The soil and surface of the town seemed favorable to the cultivation of fruit. It is broken and undulating, and the side hills and side meadows are admirable locations for horticultural purposes. The roads are stony, the knolls gravelly, with ridges of rock in many localities underlying the soil. The location of the town is high, and the scenery is rendered picturesque and beautiful by its undulating character, its rich umbrageous groves, its green pastures, its fertile basins and meadow lands.

Mr. Cutter's residence is in the south part of the town, a mile or two from the westerly edge of Newton, from which it is separated by the Charles River. It is a retired and quiet locality, about mid-distance between the Worcester turnpike and the great old stage road through Waltham, Weston, &c. Westerly of the house is a gravelly knoll, and about midway between this and the meadow ground, (overflowed in the spring,) on the east, the house is located, elevated on an embankment, and some three or four feet above the road. In the rear of the house, nearly level with the cellar bottom, Mr. Cutter's vine is established, and is trained against its white-painted side, facing to the south, with a portion of the vine trained around the easterly corner. On the easterly end the grapes were hanging in fine long black clusters, and were considerably the ripest and sweetest at the time of our visit. Around the trunk of the vine the earth was slightly banked up and mulched with meadow hay, and Mr. Cutter said the vine had not been manured for two years, and had not been watered the present season, notwithstanding the uncommonly severe drought which continued through the entire month of August. There were no appearances of the vine having suffered any from the drought; the far-spreading roots having no doubt reached the moist land on the upper edge of the meadow, and profited by the moisture of the ledge and the cellar wall of the house. The vine was well trained and spread over the side of the building, so that the wood and fruit were well open to the circulation of the air and the genial influence of the sun, both on the east and south aspects. The location was altogether favorable to the growth and development of the vine, being protected from the cold winds, north, west, or east, and open to those of the south. The ground about the vine and in the cellar, would not be likely to be frozen down so deeply in winter, (either from the presence of deep snow or geniality of location,) as in more exposed places, and would, for both these reasons, give the vine an early start in the spring, while it would still be protected from the later frosts. All these considerations and influences are seen in the results on Mr. Cutter's vine. It is loaded with fruit, as are some younger vines near it, in a ripening condition. The bunches are numerous, well-formed, well grown, some of them handsomely shouldered, and all covered with a rich purple bloom; the berries being unusually plump, full and round, many of them much less oval than is the case with the commonly received Isabella type.

The vine of which we have spoken, and from which Mr. Cutter gathered the grapes shown at the Horticultural Exhibition on the 12th September, was stated to be eight years old, and the trunk was about three inches in diameter. Of course, from what we have already said, it exhibited a fine growth of wood, and was, in every respect, in a vigorous and healthy condition. A vine about four years old, growing only a short distance off, was bearing some sixty or seventy large bunches, similar in appearance and ripeness to those of which we have spoken.

Mr. Cutter called our attention to the parent vine of his Isabellas, which is growing upon his father's grounds on the opposite side of the meadow, about fifty rods south of his own vine. This grandfather vine is twenty-four years old, and was purchased by Mr. Cutter, senior, of the late Mr. Jona. Winship, of Brighton. Its size is nearly that of an apple tree of the same age. The ground where it stands was dug to the depth of some three feet, for a space of ten or fifteen feet around it, and the space filled up with a richer soil—the substratum and knoll being of gravel. It was closely mulched, and the mulching covered with boards. The vine, with its far extending roots, reaches the rich loam towards, and at the base of the knoll, and finds support under and about the barn, on the southeast corner of which it is trained. It spreads over the half of one end (the south aspect,) of a large barn, and covers nearly as much space on the easterly side. Mr. Cutter remarked that the vine, as did some of his own, suffered from the severity of the last winter, and there were still evidences of the severity of that season to be seen at the ends of the far-reaching branches. The probability is that the wood killed, which was a very small proportion of the whole vine, was not thoroughly ripened the previous year.

This vine bore a great mass of fruit, about as forward and very nearly as fine as the clusters on Mr. Cutter's own vines. This vine presented precisely the same aspects to the sun, south and east, as Mr. Cutter, Jr.'s, but had not been so well cared for the present season, nor was it so well trained and open to the free circulation of the air among its foliage and fruit. It had, however, the large benefit to be derived from the escaping gases of the barn cellar, a window from which is situated at the trunk of the vine. The vine is healthy, very vigorous, and may be said to be enjoying a good old age, as compared with younger vines, and we see no reason why it may not continue to produce abundant crops of rich clustering fruit for a century to come. Its patriarchal habit already bespeaks for it a patriarchal character.

Here, then, are two as strong and vigorous vines as probably can be found in the State; in location eminently favorable to growth and production, both as regards the soil and the exposure; in ground that is strong, fertile and early, where the vine is shielded from disturbing winds, and protected from the late frosts of the spring and the early frosts of September. Such vines, under such favoring circumstances, ought to produce a good fruit, and they do—as good as any we have ever seen of the undoubted Isabella variety.

What gives particular interest to Mr. Cutter's vines, at this time, is the comparison which was made, at the exhibition above mentioned, between them and Mr. Bull's "Concord Grape." Mr. Cutter's clusters were admitted to be as fine as any ever shown at any of the Society's previous exhibitions, and by many declared to be finer than any they had seen before. Those who had been many years cultivators of the Isabella, and familiar with its growth and habit, expressed their surprise at the size of the berry and the bunches, and the excellence of the fruit from Mr. Cutter's vines. They could scarcely believe that the Isabella, under more than ordinary cultivation, could be grown so finely, on a vine bearing and disposed to ripen anything like a crop. We think the effect of Mr. Cutter's exhibition has been to raise the character of the Isabella grape in this vicinity, which will lead to its more careful and more skilful cultivation. It is our conviction, also, that it has confirmed and increased the value set by its friends upon Mr. Bull's "Concord Grape," which has fully sustained itself under this extraordinary and unexpected test, and is universally admitted to be equal to the best Isabellas ever raised, while others believe it to be superior to it as a table grape, and far beyond it in its qualities as a wine grape.

We have not spoken a word concerning Mr. Cutter's part in the raising of the fine grapes we have seen on his vines, and the inference might be that their excellence is entirely attributable to their peculiar location. Without intending to underrate Mr. Cutter's skill, in the least, it is due to our judgment to say that this is mainly so. Mr. Cutter is entitled to the credit of a good and skilful cultivator, whose art is eminently practical, and whose science, always the most reliable, is the result of his art. He has done all he could for his vines, and with his particular advantages, he has worked successfully. He has located them in the best position, given them abundance of nourishment, trained them well and trimmed them well, and has succeeded in growing Isabella grapes of a quality, which, as we have said, adds to the well-established character of the grape in this locality.

MISCELLANEOUS INTELLIGENCE.

Art. I. *General Notices.*

Deutzia Gracilis.—Among the numerous introductions of late years, few have found more admirers than this charming Deutzia, and possibly none of our early flowering plants are more especially deserving of notice. It is easily cultivated, tolerably hardy, forces with the greatest facility if the wood has been properly ripened, flowers profusely even in a small state, and it may be had in bloom the whole of the early spring months. At that season the appearance of a well flowered plant, covered with numerous clusters of snowy white flowers, is sure to excite admiration; and the long duration of the blossoms render it especially adapted for the decoration of the conservatory, drawing-room, or, indeed, almost for any situation in which sufficient light and warmth is maintained.

So general a demand for this Deutzia has occasioned its being extensively propagated, and well-established plants may now be obtained of any nurseryman at a trifling cost. If procured at this time, the plants, if healthy and well rooted, should at once receive a tolerable shift, using a compost consisting of two thirds turfy loam and one third leaf soil, or other decomposed vegetable matter, adding a sufficiency of sharp sand to preserve the porosity of the soil. After potting, place them in a sheltered situation out of doors; and as they become established and commence growth, remove them by degrees to an open and airy situation, when the pots should be plunged to the rim, taking care to adopt some means of preventing worms, &c., obtaining ingress to the roots. Water as required, never allowing the plants to be checked, but encourage them to complete their growth as early in autumn as possible. If required for early forcing, I prefer removing them under cover before heavy rains or severe weather sets in; being deciduous, they occupy but little room in a corner of the greenhouse or other convenient place, where they should be watered sparingly, but sufficient quantities should be given to prevent the ball from becoming dry.

Cuttings of this plant root freely in spring; use young side shoots 3 or 4 inches long taken off with a heel attached to them. Place them in a pot filled with a light sandy compost, cover with a bell glass, and set them in a close warm pit or frame, in which, if there is a gentle bottom-heat, so much the better. When rooted, pot them singly into 3-inch pots, and place them in a close frame, and as the pots become filled with roots give them a second shift, and afterwards harden them preparatory to turning them out of doors, where, with due attention, they will grow much stronger than if kept under glass. To flower strongly they should be grown a second season before they are forced, and by that time, if well treated, they should be well established plants in 8 or 9 inch pots. They will, however, flower well in pots of a much smaller size, but they should not be kept more than one year without shifting; therefore where small plants are desired it is preferable to propagate a few each season, planting out such as have become too large to be kept conveniently.—(*Gard. Chron.*, 1854, p. 469.)

Art. II. *Massachusetts Horticultural Society.*

Saturday, Sept. 2, 1854.—An adjourned meeting of the Society was held to-day.

Mr. Walker, from the Committee appointed for that object, reported the following resolutions on the death of Capt. Lovett:—

Whereas, intelligence of the death of Josiah Lovett, 2d, of Beverly, has been announced to this Society; *Be it resolved,*

1. That, by the death of Capt. Lovett, the Massachusetts Horticultural Society has been deprived of an active and useful member, who, for many years, has ranked high as an intelligent and successful cultivator, a careful observer, and a generous contributor to the fund of horticultural knowledge.

2. That, as individuals, we mourn the loss of a companion, greatly esteemed for the manliness of his character and his many private and social virtues.

3. That we sincerely sympathize with the family of the deceased, in their great affliction—called upon to mourn a friend near and dear.

4. That, as a token of respect for the memory of our departed brother,

the members of this Society wear the usual badge of mourning upon the left arm, for thirty days.

5. That the President of the Society be requested to transmit a copy of this preamble and resolutions to the widow and family of the departed.

E. M. Richards, chairman of the Committee for nominating officers for 1855, reported a list of the same.

The chairman of the Committee of Arrangements reported that the Annual Exhibition would be held on the 12, 13, 14, and 15th September.

The President reported that the papers relating to the conveyance of rights to Mr. Parker were ready.

Voted, That the members and delegates of the Pomological Convention, be supplied with tickets to the Exhibition.

Adjourned one week, to September 9.

Sept. 9.—An adjourned meeting of the Society was held to-day,—the President in the chair.

B. V. French moved that the Society employ a reporter for the Pomological Convention. Agreed to.

Adjourned four weeks, to October 7.

TWENTY-SIXTH ANNUAL EXHIBITION, September 12, 13, 14, 15 and 16. The Annual Exhibition this year was held on Boston Common, under Mr. Wright's pavilion, and though very well got up, was not so extensive or interesting as last year; this, undoubtedly, in part, was owing to the dry weather, which severely injured the growth of both fruits and flowers. The pears were much inferior to last year, while the apples were a great deal better. The cut flowers were quite meagre. The arrangement of the tables was similar to last year, a description of which we gave at the time, (Vol. XIX, p. 471.)

The weather was generally fine during the Exhibition, and there was a very good attendance, though the receipts were less by some $500 than last season. Our Report is as follows:—

PLANTS.—The number of specimens was not large, nor the variety so choice as heretofore. From the garden of J. P. Cushing, Esq. came 40 plants, and of the number were Cyrtocerus reflexa, Apheländr*a* cristàta, Stephanotus, Allamànd*a* grandiflòra, &c. Mr. T. Page sent 31 plants, among them a fine Allamànda grandiflòra, in bloom, and six varieties of acacias. M. P. Wilder sent 24 plants, including a very finely grown specimen of that new and beautifully variegated leaf plant the Cissus discolor. Messrs. Bowditch, J. French, Jr., and others, also sent a variety of plants.

BOUQUETS AND CUT FLOWERS.—In the absence of any detailed list, we must refer to the list of Premiums for an account of the names of the successful competitors. Owing to the dry weather the display was smaller and less beautiful than usual.

PREMIUMS AND GRATUITIES AWARDED FOR PLANTS, CUT FLOWERS, &C.

VASE BOUQUETS.—For the best pair, suitable for the Bradlee Vases, to Evers & Bock, the Bradlee plate, valued at $10.

For the second best, to J. Nugent, $6.

For the best pair for the Society's Marble Vases, to Winship & Co., $10.

PARLOR BOUQUETS.—For the best pair suitable for the parlor, to M. P. Wilder, $8.

For the second best, to Evers & Bock, $6.

For the third best, to J. Nugent, $5.

For the fourth best, to Winship & Co., $3.

POT PLANTS.—For the best display, of not less than 20 pots, to J. P. Cushing, $12.

For the second best, to T. Page, $10.

For the third best, to A. Bowditch, $8.

For the fourth best, to M. P. Wilder, $5.

COXCOMBS.—For the best six pots, to J. Kelley, $3.

GRATUITIES. *Bouquets.*—W. E. Carter, $2. C. S. Holbrook, $2. Messrs. Burr, $4. J. Morris, $5. Master A. G. Reed, for basket artificial flowers, $2.

Plants in Pots.—Winship & Co., $8. Evers & Bock, $5. Geo. W. Collamore, $2. Mrs. Gorely, $1. Moses B. Williams, $8. M. P. Wilder, $5. J. Mason, $1.

Designs.—Mrs. Wm. Kenrick, $3. Miss F. A. Russell, $2. W. C. Strong, $7; do., $1. Miss Fanny Wight, $5. Curtis & Lincoln, $6. Miss Mary A. Kenrick, $3. A. Bowditch, $8.

FRUIT.—The apples were exceedingly fine, and the quantity large. Messrs. Burr, B. V. French, and Lovett, had each a great number of sorts, and all handsome. Of pears there was a good display, Mr. Wilder exhibiting upwards of 250 varieties. The collection of Messrs. Stickney & Richardson were choice, well grown, and nearly up to last year. The grapes were remarkably good, and we think we may say better than for the last two years. Mrs. Durfee, of Fall River, sent some superb clusters of the Syrian, weighing about six lbs. each. The grapes of Mr. Strong and Jos. Breck & Son, were also fine. Of native sorts, Mr. Bull had his Concord in the greatest perfection, one of the bunches measuring upwards of seven inches long and six inches broad, perfectly colored, with the deepest bloom, altogether a grand display, which attracted, and deservingly, the greatest attention. There were some good Isabellas, but, generally, they were not near ripe. Peaches and plums were contributed in small quantities only, owing to the lateness of the season. Mr. Vandine, of Cambridge, had the best display of the latter fruit. We give as detailed a report as our limits will allow:—

From Mr. Cabot, President of the Society, 145 varieties of pears, among which were the Beurré de Montigeron, Wilkinson, Alpha, Belle apres Noel, Baronne de Mello, B. Langelier, Cushing, Tyson, Dumortier, Figue, Josephine de Malines, Lawrence, des Deux Sœurs, St. Dorothea, St. André, Vesouziere, Wredow, &c.

From M. P. Wilder, 273 varieties of pears, including, besides those we have enumerated at p. 475, Pie IX, B. Clairgeau, Duchess d'Orleans, Beurré Sterkman, B. Langelier, &c. Also, a fine basket of fruit.

From B. V. French, 150 varieties of apples, including the Mother, St. Lawrence, Golden Ball, Esopus Spitzenberg, Porter, 20 ounce, Ladies' Sweet, Minister, Ortley, Hartford Sweet, Murphy, &c.

From R. Manning, 117 varieties of pears, among which were Wilbur, Chapman, Cross, Comte de Lamy, Petre, Hadley, W. Nelis, Dundas, Walker, Dallas, Calhoun, Beurré Hardy, Emerald, Grand Soliel, Alpha, Tyson, Westcott, Van Assene, &c., &c.

From Hovey & Co., 40 varieties of pears, part of which we have enumerated at p. 476.

From A. D. Williams & Son, 65 varieties of apples, and 70 of pears.

From Jos. Stickney, 34 varieties of pears, including Beurré Langelier, B. Bosc, Dix, W. Nelis, &c, Also, 16 var. of apples, among which were fine specimens of the Melon.

From J. S. Sleeper, 32 varieties of pears, viz., Andrews, Seckel, Henry IV, Figue, Colmar d'Ete, Cushing, Gansell's Bergamot, Bleeker's Meadow, &c.

From the garden of the late Capt. Lovett, 41 varieties of apples, including fine Northern Spy; also 19 varieties of pears.

From S. Walker, 125 varieties of pears, among which were Ananas d'Ete, Beurré Sterkman, B. Langelier, Belle de Noel, Bonne des Zees, Chapman, Dix, Walker, Figue, Graslin, Howell, Paternoster, St. André, Sullivan, Thompson, &c.

From W. R. Austin, 31 varieties of pears, the principal kinds of which are enumerated at p. 476.

From Sam. Downer, 38 var. of pears. From Eben Wight, 53 var. of apples, and 15 of pears. From E. M. Richards, 20 var. of apples, 10 var. of pears, peaches and Christiana melons, &c. From Messrs. Burr, 30 var. of apples. From Evers & Bock, 34 var. of pears, and 19 of apples. From Cheever Newhall, 14 var. of apples, 20 var. of pears, and Old Mixon peaches. From J. B. Moore, 17 var. of apples.

From Winship & Co., 65 var. of pears. From F. Dana, 12 var. of pears. From A. W. Stetson, 12 var. of pears, and Summer Sweet and Paradise apples. From H. Vandine, 60 var. of pears, and 35 var. plums, a splendid display of the latter fruit. From Jos. Richardson, 20 var. of pears. From John Gordon, 21 var. of apples, 4 var. of plums, and Bartlett pears. From W. A. Crafts, 12 var. of pears.

From Jos. Breck & Son, 12 var. of grapes. From W. C. Strong, 17 var. of grapes, viz., Red Chasselas, Muscat of Alexandria, Gascoigne, Syrian, Damascus, Chasselas Musque, &c., &c.; also, a design for grapes. From B. Harrington, 20 var. of apples, 8 of pears, and 2 var. of grapes. From J. Millikin, Bartlett pears. From W. Gilman, 3 var. of pears. From Geo. Nelson, 5 var. of apples. From C. Reed, 5 var. of apples.

From Jas. Eustis, 25 var. of apples. From Jos. Newhall, 8 var. of apples. From J. H. Watts, N. Spy, and Melon apples, Swan's Orange pears, and

Clinton grapes. From C. S. Holbrook, fine specimens of grapes and peaches.

From Thos. Page, 4 var. of grapes, and 4 var. of apples. From N. Stetson, several var. of grapes, and 10 var. of pears. From Mrs. F. B. Durfee, splendid specimens of Syrian, B. Hamburg and other grapes. From J. A. Kenrick, 7 var. of pears, and 6 of apples. From C. E. Grant, 5 var. of grapes and Bergen's Yellow peaches. From G. Merriam, 12 var. of pears. From John Clap, Isabella grapes. From G. B. Cutter, Isabella grapes. From P. Lawson, 20 var. of apples. From E. Marston, 7 var. of pears, and 6 var. of apples. From Miss Mary Lewis, 6 var. of peaches. From E. W. Bull, 30 clusters of the Concord grape, all splendid specimens.

Fruit was also contributed from F. Marsh, Dedham; Dr. Lewis Wheeler, Cambridge; R. Winslow, Roxbury; S. B. Pierce, Dorchester, and A. Lackay, Marblehead; Wm. Blake, Jamaica Plain; C. Young, Dorchester; E. C. Stevens, Dorchester; S. Cleveland, Salem; Mr. Lathrop, Watertown; G. W. Collamore, Boston; W. W. Whieldon, Concord; Isaac Fay, Cambridge; H. L. Hayden, Newton; Levi Brigham, Boston; Dr. Grant, Newburgh, N. Y.; J. H. Herring, D. E. Jewett, B. Bass, W. R. Rodman, New Bedford; J. W. Foster, Dorchester; and several others.

PREMIUMS AND GRATUITIES AWARDED FOR FRUIT.

Apples.—For the best 30 varieties, of 12 specimens each, to Messrs. Burr, the Lyman plate, valued at $30.
For the second best, to B. V. French, $20.
For the third best, to Estate of Josiah Lovett, $10.
For the best 12 varieties, of 12 specimens each, to B. V. French, the Society's plate, valued at $20.
For the second best, to J. B. Moore, $15.
For the third best, to Messrs. Burr, $12.
For the fourth best, to John Gordon, $8.
For the best dish, 12 specimens of one variety, to James Guild, $6.
For the second best, to Francis Marsh, $5.
For the third best, to John Gilbert, $4.
For the fourth best, to B. V. French, $3.

Pears.—For the best 30 varieties, of 12 specimens each, to M. P. Wilder, the Lyman plate, valued at $30.
For the second best, to Hovey & Co., $20.
For the third best, to Josiah Stickney, $10.
For the best 12 varieties, of 12 specimens each, to Josiah Stickney, the Lyman plate, valued at $20.
For the second best, to Josiah Richardson, $15.
For the third best, to W. R. Austin, $12.
For the fourth best, to J. H. Stetson, $8.
For the best dish of pears, 12 specimens of one variety, to N. Stetson, for Beurré Diel, $6.

For the second best, to Josiah Richardson, for Flemish Beauty, $5.

For the third best, to John Gordon, $4.

For the fourth best, to J. A. Stetson, for Flemish Beauty, $5.

ASSORTED FRUIT.—For the best basket of fruit of various kinds, to M. P. Wilder, $8.

For the second best, to Azell Bowditch, $4.

GRAPES.—For the best 5 varieties, 2 bunches each, to W. C. Strong, $12.

For the second best, to Mrs. F. B. Durfee, $8.

For the third best, to Charles E. Grant, $5.

For the best 2 varieties, of 2 bunches each, to T. Page, $6.

For the second best, to J. Pritchard, $2.

PEACHES.—For the best dish, of not less than 12, to W. Bacon, $5.

For the second best, to D. E. Jewett, $3.

GRATUITIES. *Peaches and Nectarines.*—To G. W. Willis, $3; to J. Richardson, $3; to N. Stetson, $3; to H. Y. Gilson, $2; to E. C. Stevens, $2.

Baskets of Assorted Fruit.—To E. M. Richards, $2; to W. A. Crafts, $2; to N. Stetson, $3; to Misses Cordwell, $2.

Grapes.—To W. Blake, $2; to J. Breck & Son, $5; to W. C. Strong, $3.

Apples.—To A. D. Williams, $10; to Bowen Harrington, $6; to Samuel G. Hyde, $8; to Josiah Stickney, $6.

To W. R. Austin, for Northern Spy, $3; to John Parker, for Blue Pearmain, $3; to Josiah Richardson, for Ribston Pippin, $3; to Levi Brigham, for Nonpareil, $3; to E. M. Richards, for Gravenstein, $3; to Theodore Clapp, for Gravenstein, $3; to John Gordon, for Grand Sachem, $3; to Josiah Stickney, for 20-ounce Pippin, $3; to A. W. Withington, for St. Lawrence, $3; to Benjamin Bliss, for Porter, $3.

For collections, to Peter Lawson, $5; to Thomas Page, $3; to A. W. Stetson, $7; to C. S. Holbrook, $3; to Cheever Newhall, $3; to John A. Kenrick, $3; to James Eustis, $7; to Evers & Bock, $6; to E. Winslow, $3; to Eben Wight, $6; to Josiah Newhall, $3.

Pears.—To George Southard, for Louise Bonne, $3.

To Samuel Downer, for fine specimens, $10.

For collections, to Samuel Walker, $10; to J. S. Cabot, $10; to J. S. Sleeper, $5; to Josiah Lovett, $5; to Winship & Co., $5.

For fine specimens, to William Bacon, $5.

For collections, to Henry Vandine, $5; to Robert Manning, $10.

AWARD OF PREMIUMS AND GRATUITIES FOR VEGETABLES.

Not having room for a detailed Report, we give the awards of premiums:—

For a fine display, to J. Gordon, $2; to J. Crosby, $3; to N. Stetson, $4.

For Davis Seedling Potatoes, to H. L. Shattuck, $2; to A. Bowditch, $5; to J. Stickney, $4; to S. B. Pierce, $2; to C. S. Holbrook, $2.

For Sea Kale, to J. L. Little, $1; to T. McCarty, $3; to J. Nugent, $3.
For Squash, to Winship & Co., $2.
For Hybrid squashes, A. W. Stetson, $10.
For corn, to Messrs. Burr, $2; to B. Harrington, $4; to A. D. Williams, $4; to G. Merriam, $4; to A. D. Webber, $4.
For Lima beans, to S. Jordan, $1.
For potatoes, to J. Hyde & Son, $8; to A. R. Pope, $2.
For celery, to B. Harrington, $2.
For potatoes, (Davis,) to J. B. Moore, $2.
For squash, to E. M. Richards, $1; to G. R. Sampson, $2.
For tomatoes, to P. Lawson, $1.
For potatoes, (new,) to B. V. French, $2.
For Summer squash, to H. Bradlee, $3.

GRATUITIES.—For the best display and greatest variety at the Annual Exhibition, to B. V. French, $10.
For the second best, to H. Bradlee, $8.
For the third best, to Stone & Co., $6.
For the fourth best, to J. B. Moore, $4.

Mammoth Squash.—For the largest and best, to A. W. Stetson, the Society's silver medal.
For the second best, to Messrs. Derby, $3.

Pumpkins.—For the largest and best, to T. McCarty, the Society's silver medal.
For the second best, to G. Nelson, $3.

Melons.—To B. V. French, $1; to N. Stetson, $3; to J. Stickney, $2; to G. Merriam, $1; to A. D. Webber, $2; to H. Bradlee, $2.

HORTICULTURAL OPERATIONS

FOR OCTOBER.

FRUIT DEPARTMENT.

SEPTEMBER has been an unusually dry month, with only one or two light rains, in all not more than three inches. Vegetation has revived somewhat, though still dry for the season. A hard frost, at the unusual period of September 20, has assisted to check the growth of trees, and the leaves are falling at an earlier period than usual.

Now is the time to prepare the fall work. Notwithstanding the various opinions upon the subject, we are convinced the autumn is *the* time to set out fruit trees. Ground should be trenched, or subsoiled as soon as possible, while in a dry and friable condition. As soon as the leaves will shake from the trees transplanting may be commenced.

GRAPE VINES in the earliest houses should be pruned and put in readiness for starting next month. Wash the vines now, to kill all insects. Vines in the other houses will need no other attention than to use every means to perfectly ripen the wood.

STRAWBERRY BEDS may yet be made; with a little care they will get well established before winter sets in.

FRUIT TREES of all kinds may be removed after the 15th of the month.

CURRANTS, GOOSEBERRIES, &c., may now be set out.

FRUIT should be looked after; gather in dry weather, and place away in the fruit room in boxes, or in a cool place.

FLOWER DEPARTMENT.

The early frosts of September have already induced cultivators to look well after their plants, and all tender things, we presume, have been removed to the house, or protected in frames. Now is the time to rearrange and put in order everything in doors. Top dress all the plants that need it; repot others, and stake and prune all straggling specimens. Remove everything from the borders that will be required to give a young stock for spring; and put in cuttings, if such are too large and unwieldy to take up.

CAMELLIAS should be washed and top dressed.

AZALEAS should be rather sparingly watered now.

CHRYSANTHEMUMS should have a good situation in the greenhouse.

OXALISES, IXIAS, &c., should be potted now.

ACHIMINES, GLOXINIAS, &c., may be removed to a dry warm shelf, or placed under the stage.

ROSES should have a shift, if in small pots.

FUCHSIAS, done blooming, may be cut in and placed away under the stage.

VERBENAS, PETUNIAS, &c., should be propagated from cuttings.

HEATHS should have a cool, airy situation, near the glass.

CYCLAMENS should be repotted.

NEMOPHILA, SCHIZANTHUS, &c., should be potted off now.

GLADIOLUSES, TIGER FLOWERS, &c., should be taken up.

JAPAN LILIES, in pots, should be kept dry, in a cool frame.

PELARGONIUMS should be repotted now, and have an airy situation, as near the glass as convenient.

MONTHLY CARNATIONS should now be shifted into good sized pots.

FLOWER GARDEN AND SHRUBBERY.

TULIPS, HYACINTHS, and other bulbs, may be planted this month.

JAPAN and other LILIES may be reset this month.

PÆONIES may be transplanted now.

HERBACEOUS PLANTS may be taken up, divided, and reset.

DAHLIAS should be taken up before hard frosts.

CARNATIONS AND PICOTEES should be planted in frames, where they can have a little protection.

PANSIES may be taken up, divided, and reset again.

THE MAGAZINE
OF
HORTICULTURE.

NOVEMBER, 1854.

ORIGINAL COMMUNICATIONS.

Art. I. *Our Neglected Shrubs.*

Not less important is a knowledge of our neglected shrubs than of our neglected trees; for while those who possess grounds of any extent require both trees and shrubs for ornamental purposes, those who own only small gardens are compelled, with few exceptions, to select the latter. All, therefore, who would wish to have the best selection in the smallest space, are interested in knowing which are the best, and in what their beauty consists.

It is needless to deny that there is altogether too general a desire for mere novelties among amateur planters; not that we undervalue, more than any one, a new thing if really fine, or even if it has any merit whatever; but the simple desire to possess a thing because it is new, to the exclusion of old and tried favorites because they are common, is a false taste which should be corrected. In small collections especially is this a great error; for these, a selection should always be made; everything should be chosen with a view to the best effect, not so much as a whole as for individual beauty. In large gardens this is less important; there, the opportunities to plant in groups, and the amount of space, require many more plants, and they are to be viewed more in regard to their effect on each other and as a whole; consequently a limited number of kinds, repeated over and over again, would soon tire the eye, and one part of the ground would be but a repetition of the other. The object of the planter should be to keep up the interest of the spectator, and this can only be done by a great variety of shrubs, and skill in grouping them to produce the finest effect.

Among shrubs, as among trees, there are certain popular sorts which every planter thinks he must have, or his grounds will be incomplete. Consequently these are well known, and their names are familiar; they are the Snowball, Lilac, Syringa, Honeysuckle, Althæa, and a few others, and, though none the less desirable because popular, still the catalogue is altogether too short, and leaves out many of the most beautiful things. The Laurel (Kalmia), Rhododendron, Magnolia, Andromeda, Mahonia, &c., are not named, and though growing wild, perhaps, in the near neighborhood of many a suburban residence, yet remain quite neglected or entirely unknown.

The elegance of some of our American plants has established for themselves a distinctive title in English gardening: there they are grown in what is called, *par excellence*, the American Garden—that is, a spot of ground with a prepared soil, or one selected as near as may be to that which the plants enjoy in their native habitats. Here they are grown in the greatest perfection, the most magnificent feature of every complete English residence, and truly may claim, through the addition of hybrids raised from our native and foreign species, the admiration and praise which have been bestowed upon them by English writers. We only need to see such a garden once to know how much we have lost in our efforts at the acquisition of foreign shrubs to the neglect of our own.

The four principal plants which we have overlooked are the Kalmia, the Rhododendron, the Azalea, and the Swamp Magnolia, (M. glauca). To these may be added the Ledums, Andromedas, Rhodora, Vacciniums, Holly, &c. Many of these we have previously noticed or described. Those less known are the following:—

CEPHALANTHUS OCCIDENTALIS, or BUTTON BUSH.—A pretty bush of an upright and branching habit, found growing on the banks of streams, and attaining the height of six or eight feet. The leaves are broad oval, entire, and shining green on the surface. The flowers appear in globular heads at the ends of the shoots, and are of a yellowish white. When clothed with their round balls, which are composed of many individual flowerets, the Button bush is a showy plant. It blooms in June and July, and frequently as late as August. It is easily grown in any good moist soil.

VIBURNUM NUDUM, V. LENTAGO, V. DENTAˋTUM, and **V. LANTANOIDES**, are all elegant shrubs, deserving a place in every collection. The flowers are white, in flattish cymes, on the ends of all the shoots, and the general appearance of the bushes is neat and handsome. V. lantanoides is the tallest growing, and V. lentago is the most distinct of the group.

ANDROMEDA POLIFOˋLIA, THE WATER ANDROMEDA—a native of both Northern Europe and America, and first detected by Linnæus in Lapland, who has given a full account of its discovery and the cause of its poetic name. The beauty of its tiny crimson corols, which change to a delicate and fine flesh color, suggested to his fancy the character of Andromeda, as described by the poets, for the plant grows naturally on little hillocks surrounded with water, as Andromeda herself was chained to a rock in the sea. It does not grow over a foot high; the leaves are long, narrow, glossy, deep green above, and silvery beneath. It is a lovely plant, and grows freely in any moist, half shady place.

ANDROMEDA PANICULAˋTA, CALYCULAˋTA, and **RACEMOˋSA**, are also handsome plants, growing three to five feet high, with numerous racemes of globular white corols—all worthy of attention.

CLEˋTHRA ALNIFOˋLIA, THE ALDER-LEAVED CLETHRA.—There is scarcely a low stream or boggy islet in New England where this beautiful shrub is not found, and yet it is rare in gardens. In August, its fragrant flowers fill the air with their perfume. It grows three to six feet high, erect, throwing up numerous suckers which form a compact bush; the leaves are small, obovate, bright green, and the flowers appear in long terminal racemes, white, and delightfully fragrant. No plant grows more readily under the most ordinary garden cultivation.

LEDUM LATIFO'LIUM, BROAD-LEAVED LEDUM.—A small evergreen shrub, growing two feet high, with rusty-looking leaves, and terminal corymbs of white flowers. In general appearance, when not in bloom, it resembles the Azalea. It likes a low and damp locality, but our plants flourish well with common garden treatment.

PRI'NOS VERTICILLA'TUS, BLACK ALDER.—A very beautiful shrub, and one which would have been everywhere cultivated if only a foreign plant, its very abundance making it too common. It grows in low lands, where it is at this season conspicuous by the quantity of its deep scarlet berries, which cover the shoots. It grows freely, but prefers a rather moist situation, generally attaining the height of five or six feet.

PRI'NOS GLABER, INK BERRY.—One of the finest evergreen shrubs, with small glossy leaves, which retain their verdure the year through. It grows rapidly, forming a dense bush four to six feet high. Its elegant foliage is eagerly sought after by bouquet makers in the vicinity of Boston, who visit Cohasset, where it grows abundantly, and gather enough to last all winter.

PRI'NOS LÆVIGA'TUS is another species similar to this, with glossy evergreen leaves and scarlet berries in autumn and winter.

DIRCA PALU'STRIS, LEATHER WOOD.—A branching shrub, growing four to six feet high, with alternate, oval, entire leaves, and yellowish white flowers, which expand and fall off before the foliage appears. It grows in damp places, and is a good plant for low, shady shrubberies.

THE CORNELS, (CO'RNUS SERI'CEA, PANICULA'TA, &C.)—Pretty shrubs, growing four to eight feet high, with terminal cymes of flowers, succeeded with black or scarlet fruit.

ILEX OPA'CA, THE AMERICAN HOLLY.—Though somewhat more than a shrub, attaining the height of a small tree, the holly should not be omitted here. It is an elegant addition to every garden, and should be with us, as the European species is in England, universally planted.

We might particularize other shrubs, but these are the most prominent of the least known kinds.

Art. II. *Scenery and Rural Improvements in Western New York. The Wyoming Water-Cure Institute.* By Wilson Flagg.

The face of the country in the State of New York, if we except that portion which is bounded by Lake Champlain and the Hudson River, is comparatively level and rolling, and is remarkable for its green fields, its extensive wheat farms, and the variety of its woods. It is seldom either mountainous or abrupt, and the greater part consists of that description of soil and landscape which is most susceptible of improvement, well rewarding the industry of the farmer and the efforts of the tasteful improver. Trees of a greater number of species are found in perfection here than, perhaps, in any other portion of the country. A great proportion of the wood, however, is the primitive growth of the forest. Hence the woods, in a landscape view, do not melt so imperceptibly into the plain, as they do in the early settled parts of the New England States; but they rise perpendicularly out of the ground, and exhibit a boldness of outline which is peculiar to all new countries just carved out of the wilderness.

One of the most beautiful valleys in the western part of New York is that in which is situated the little village of Wyoming, about fourteen miles from Batavia. This valley is a perfect level, resembling the ancient bed of a river, and bounded east and west by a gently sloping range of hills, that rise to no great elevation, looking one above another, the highest being most distant from the valley, and producing good crops of wheat on their very summits.

This kind of scenery is what Edmund Burke, and after him Mr. Price and Mr. Downing, would term *beautiful*, as distinguished from that of a more wild and abrupt character, which they would term *picturesque.* I have already endeavored to prove that this distinction is incorrect; and would add, that abrupt scenery may be beautiful, and rolling scenery, with regular waving lines, may be exceedingly picturesque.

The origin of this false distinction is found in the fact that abrupt situations are generally more wild, and rolling and level situations more nearly resembling the smoothness of cultivation. But smooth lines when they are viewed over the broad expanse of a solitary moorland, half covered with water, interspersed with tufts of brown sedge-grasses, and here and there a round clump of alder bushes, are expressive of all that wildness and dreariness which these writers believe to be the essence of a picturesque scene. What could be more beautiful, on the other hand, than the most abrupt landscape when covered with woods, in all the splendor of October, or than the abrupt glaciers of an icy mountain, burnished by the last rays of the setting sun? There are no lines or figures which are exclusively picturesque—a word that is nearly synonymous with poetical or expressive—and which may, with equal propriety, be applied to the spires of a gothic cathedral, or to the domes of an Eastern mosque.

About half a mile from the village of Wyoming is the "Water-Cure Institute," under the charge of its proprietor, Dr. P. H. Hayes, a gentleman of excellent attainments in medical science, and whose fine taste is fast surrounding one of the most delightful of natural scenes with the embellishments of the modern landscape art. If the Doctor should carry out all his present designs, he would be able to exhibit, in the course of a few years, one of the most remarkable specimens of landscape gardening in this country. His object in making these improvements is not only to gratify his own taste for the beautiful in nature, but likewise to furnish an agreeable and healthful resort for his numerous patients, who are, for the most part, above the average of the great world in intelligence and refinement. By these operations the proprietor shows no less wisdom than taste; and there can be no doubt that the unquestionable advantages obtained by invalids, at institutions of this kind, would be greatly increased by thus affording them an opportunity for wholesome exercise and agreeable recreation, amidst the grand and beautiful scenes of cultivated nature.

The grounds of the Institute consist of sixty-four acres, and may be divided into the lawn and park, the orchard and farm, the ravine and walk, and the garden. They are composed of three great natural terraces, or hills rising one above another, like a flight of stairs, separated from each other by a narrow dale, which is shaded by a grove of trees. These hills are either laid down to grass, or sowed with wheat, adding the charm of good tillage and abundance to the natural beauties that surround the place. They are mostly encompassed by woods, consisting chiefly of the primitive growth of the forest, and forming as dense a mass of foliage as was ever crowded into a single space. It may be remarked here, that although the individual trees of the primitive forest are very imperfectly shaped, and elongated like the tall weeds in a luxuriant and neglected field, yet no other description of wood exhibits a more umbrageous mass, or a more remarkable variety of foliage, on account of the greater number of species which may in this case be crowded together into the same limits.

From the two highest of these terraces is a charming view of the village and valley of Wyoming, and of the almost interminable slopes that are spread out beyond. These slopes exhibit a nearly equal mixture of wood and tillage, and are delightful as scenes of natural beauty, and as evidences of the deep and almost inexhaustible resources of the husbandman in this fertile region of country. The prospect from the highest of these eminences extends above twenty miles, and affords the spectator a view of the hills that lie beyond the Genesee River.

The ravine is a singular natural curiosity, consisting of a deep channel, that seems to have been formed by the brook that runs through it; and which, in the course of ages, has worn itself a passage through the rolling hills, on its way into the Wyoming valley. This ravine is two miles in length, about fifty feet in average width at the bottom, and one hundred feet at the top, making a very steep declivity on both sides, covered almost entirely, from one end to the other, with a dense forest of all the trees of the climate. The banks are supported by a foundation of calcareous slate, that readily breaks into fragments about the size of a brick, forming a sort of natural mason-work, that gives firmness to their almost perpendicular sides.

The grounds of the Water-Cure Institute are bounded on one side by this ravine, which, with its woods, affords one of the most romantic walks all along under the edge of the summit and through the grove by a path whose course is regulated by the exigencies of the situation. This walk is a most interesting part of the many scenes and objects that attract the attention and win the admiration of the visitor.

The house is situated on the first and lowest of the natural terraces which I have described, and is fronted by an extensive lawn, that is to be continued down to the foot of the beautiful semicircular slope that surrounds the house in front and on the two sides. Upon this slope are many noble trees, to which the proprietor intends to make an addition of several hundreds of different species, enclosing the lawn and the house by a grove or park. The public street describes a sort of semicircle around this place, which is separated from it by a deep and narrow dell, covered with a variety of trees. The approach leads from this street on the north side and from the ravine road on the south side of the house.

From the north side of the house, by a nearly straight avenue that leads through the orchard to the flower garden, you are conducted to a gigantic tulip tree, of fine proportions, under whose shade is a lawn provided with a circular seat for visitors. This is a pleasant and retired spot, though unaccompanied with a prospect. From the tulip tree, by a turn in the avenue, the visitor is conducted to the spring, that flows into a basin, from which the Institute is supplied with soft water of crystal purity, by means of an hydraulic ram. This basin of water is in the centre of a natural grove, and is a favorite retreat for the family and visitors, where they are surrounded by a luxuriant canopy of foliage and vinery.

We pass next through a corner of the orchard, and arrive at the foot of the second or middle terrace. On the left of this path, in an opening in the ravine, is an old mill and a water-fall. As this building is neither sufficiently ancient nor peculiar in its construction to make a picturesque ruin, the proprietor intends to remove it, and to erect in the place of it some little fanciful structure, which may at the same time form an arbor and seat, and interest the visitor by its poetical suggestions. From this point, by a circuitous path, we ascend the hill and come to another opening in the ravine wood, which affords a view of the street below, and of the cultivated grounds beyond it. At the top of this ascent we enter another natural grove, which has been cleared of its under-growth, and forms a cool, shady resort, bounded on the one side by a broad sweep of undulating field and wood, and, on the other side, by the ravine, which is so high and so steep as to affect one with a sensation of awe, but is rendered perfectly secure by its dense growth of wood.

Passing along a miscellaneous course, under the summit of the ridge at one moment and outside of it at the next, we cross the narrow grove in the dale between the second and third terraces. Having at length ascended the hill by a variously winding path, we are conducted at the summit to a very wild and singularly romantic spot. At this point, in the seclusion of a thicket of beech and hemlock trees, we obtain a view of the ravine road, nearly one hundred feet below, as it winds along through this great natural channel, accompanied by the brook sometimes on one side and sometimes on the other. Here every one is struck with the delightful effect of the various sounds, as they come up with stifled reverberations through this solitary hollow. The rattling of the wheels of a passing vehicle, the voice of a human being, the cawing of a raven, or the tinkling of a cow-bell, are curiously modified as they pass upward and come to the ear with an indescribable charm.

The visitor has now arrived at the highest point of these grounds; and if he returns by another path through the open fields, each descent affords him a new view of a long stretch of farms, of gently rolling hills alternating with woods and level plains, extending as far as the eye can reach. He has already seen enough to convince him that there are but few places that surpass this in the combination of all those natural and artificial beauties and advantages which are so charming to a person of refined taste, who delights in the solitudes of nature. Landscape gardening has long been successfully pursued in the eastern part of the State, and perhaps in no part of the country are more beautiful grounds to be seen than many of those on the banks of the Hudson. It is pleasing to see this evidence of an awakening sense of the value of such improvements in the vast and fertile regions of the West.

Having concluded a professional visit to this place, I returned home by the northern route, passing down Lake Ontario to Ogdensburgh, and thence through Vermont and New Hampshire. This journey afforded me an opportunity of seeing the river and valley of the St. Lawrence, which are destined, at no very distant future, to be the most wealthy and beautiful portion of the American Continent. Wheat, finding here its native and most congenial climate, can be raised to perfection in this latitude; and all the northern fruits, except the peach, may be successfully cultivated. Neither the soil nor the climate, however, are so favorable to agriculture as those of the great Western valleys. But wherever Nature plays a hard game with men, if it be not too hard, she sharpens their wits and strengthens the vigor of all their faculties, and thereby more than compensates them for the want of a fertile soil and luxurious climate. To these circumstances may undoubtedly be attributed the superior industry, enterprise, and intelligence of the people of the New England States.

For the space of several miles on the road from Ogdensburgh to Lake Champlain, we obtained what I conceive to be one of the most charming qualities of landscape—distance of prospect. Here, without seeming to be on a great elevation, one can look over the great valley of the St. Lawrence, a distance of forty miles or more, and trace the long line of descent to the river, and the equally long line of ascent from the river, on the other side towards Montreal. I must confess that I felt the emotion of sublimity while beholding this vast region, and riding along, as it were, on a level plain, more powerfully than when journeying through the most romantic scenery among the Green Mountains.

Mountains, except on the outside of a range, are unfavorable to the attainment of extensive prospects; and the sublimity of this kind of scenery cannot be realized when passing along through their valleys. Prospects of the grandest description are frequent; but the inhabitants are, for the most part, shut out from all chance to look abroad upon the earth, or even to see the rising and setting sun. The distant view of a mountain rising into the clouds, and enveloped in a misty obscurity that enhances our conception of its magnitude, is always attended with an emotion of grandeur, very similar to the emotion felt on viewing the surrounding landscape from its higher elevations. Nothing could be more beautiful, however, at this season, than the mountains, almost entirely covered with woods, displaying the most wonderful variety of tints, and opening to the sight, at almost every turn, a green vale dotted all over with cottages and sleek and well-conditioned flocks and herds.

If one were obliged to make the distinction, I should apply the epithet *picturesque* to the green vales with their farm houses and flocks, and the epithet *beautiful* to the mountains with their interminable wreaths of autumnal foliage. My reasons are, that the vales and their accompaniments possess only that *relative* beauty which depends on their power of exciting pleasant images in the mind: while the hills, with their golden and ruddy splendor, affect the mind with pleasure through the medium of our visual sensations. Though our emotions, in both cases, are mixed, yet in the latter case they are more purely sensual,—in the former, more purely ideal. And this I conceive to be the only true distinction to be made between the beautiful and the picturesque, which, in the majority of instances, are so intimately blended as to render it difficult, for one who is not accustomed to analytical reasoning, to separate them. Alison, in his treatise, seldom uses this much-abused word, but applies the terms "*relative beauty*" and "*moral beauty*" to that class of objects whose character is properly designated, under certain combinations, by the word picturesque, and which comprehends the large majority of objects usually felt and described as beautiful.

These philological remarks are prompted by the consideration that the public have generally adopted the false distinction between these two words, made by late writers who followed the authority of Mr. Burke. This error originated, along with a great many others, in this author's "*Treatise on the Sublime and Beautiful,*"—a work full of errors, and of very little merit. Mr. Burke's brilliant reputation as a statesman and orator threw a lustre upon this juvenile production which has muddled nearly all subsequent writings in the English language on similar subjects. The usefulness of Sir Uvedale Price's "*Essay on the Picturesque,*" is greatly diminished by false reasoning that arose from his foolish deference to the authority of a distinguished orator who was a very mean metaphysician.

Beverly, October, 1854.

ART. III. *On the Pruning of Pyramid or Dwarf Standard Pear Trees.* By M. DE JONGHE of Brussels. With Remarks by the EDITOR.

SOMETIME since, (p. 410,) we copied the remarks of M. Jonghe, on the culture of the pear tree in England, and took that occasion to show wherein we believed his views were entirely erroneous, and we shall at another opportunity present the views of Mr. Rivers, who agrees with us in our opinion. We now present our readers with another of M. Jonghe's papers, from the *Gard. Chronicle*, on the cultivation of pyramidal pear trees, and however so incorrect he might have been as to the causes which contribute to the ill success of the growth of the pear in the neighborhood of London, he makes amends by giving us sound information on the management of the pear *at home.* We have never read an article which so fully accords with our own practice as this; in truth it is a complete exposition of the system we have pursued with our trees, with one exception, and that is the general pruning in September. We have, however, tried it on many trees, and should have adopted it generally, but for one reason, viz., the loss of our scions, which to us are of too much value to be cut off so early in the season. But the reasons he urges for early pruning, are founded on true physiological principles, and deserve the attention of all cultivators.

The climate of Belgium is similar to our own: the summers are warm and somewhat longer, and the winters are severe. Hence the mode of pruning practised there is applicable with us, and the experience of M. Jonghe the same as if it had been obtained here.

His observations on pinching are excellent; and his practice precisely like ours: the side-shoots are pinched once, twice, or thrice, according as they push, and the main shoots are left at full length, till the autumn or winter pruning. Our article in a previous volume, (XV, p. 300,) read in connection with M. Jonghe's, will show the similarity of our system of pinching and pruning.

Pyramidal trees are beautiful objects in any garden, and the care and labor necessary to give them a symmetrical shape, though incessant, is a source of the greatest enjoyment to every lover of fine trees. The information contained in M. Jonghe's paper, we trust may aid all who are in want of information upon the management of their trees:—

In our cold, moist, and variable climate, it is highly important that the pear tree should suffer as little as possible from the prunings which are performed at the fall of the leaf, especially as regards trees in deep light soils, and at the end of winter where the soil is cold and moist.

The removal of all the shoots, not required for the formation of a pyramid, during the first flow of the sap in the early part of the season, following this practice up by the pinching of laterals during the whole of the summer, contributes greatly towards simplifying the winter pruning, which is thereby reduced to the shortening of the leading shoots to a good eye.

In the climates of Belgium and England, and in those analogous, or indeed colder, we might even dispense with winter pruning. This method is more especially applicable to young trees which have not borne fruit, as it tends to bring them into a bearing state. After the second or August flow of sap is over, the tree still possesses sufficient powers of vegetation to heal the wounds which have been made upon it. Trees, although vigorous, always suffer from even the most moderate winter pruning.

To untimely and injudicious pruning may be partly attributed the barrenness of trees which are old enough and sufficiently vigorous to bear fruit; and to the same cause may be equally attributed the dropping of fruit when setting in spring. From these considerations, and in consequence of a series of experiments made during several years, I believe that it would be more advantageous to shorten the leading shoots of pyramid pear trees between the 15th and 25th of September, than during or after winter.

Six years ago I commenced to experiment on some wild pear trees, which had been raised with the view of obtaining new and improved varieties of fruits; and afterwards on some young trees in my collection of pyramids. Having attentively observed the results of these experiments, I remarked that there was a reflux of the sap into the twigs, spurs, stem, and terminal branches of the trees. The whole tree thus acquired a stronger constitution, and could, therefore, better resist the cold of winter. The roots, in direct communication with the branches, increase greatly during the period when vegetation ceases and the elaborated sap returns, which it continues to do till the winter solstice. This emission of fresh roots promotes, even in winter, the formation of fruit buds, and gives them strength and consistence for vegetating with greater energy in the following spring. But, it should be understood, that all wounds, or cuts, made in the pear tree during winter, tend to produce a contrary effect. The experiments which have been successfully tried on a great number of seedling pear trees, and on some pyramids, of 4, 5, or more years from the bud, have convinced me of the utility of this new method of pruning in our cold and variable climate.

In order that this method may be understood by any amateur who may wish to try it, some preliminary details will be necessary. Supposing that one or more trees are to be planted with the intention of being trained as pyramids, it is advisable to select such as have been worked 2 or 3 years, and that they should be well furnished with fibrous roots, in consequence of the trees or stocks having been two or three times transplanted. They ought to possess good forms, and should be taken up with all their fibres, but without shortening the stems or branches; then planted with due care, if in light deep soil, in the first fortnight of November; but not till the first fortnight of March, if the soil is heavy and moist. If the trees, whether on the pear or quince stock, are planted in November, they should not be cut back till the end of the following March. The branches of trees planted in the beginning of March should be left entire throughout the summer; they should not be pruned till the following March. The trees planted in November may be again pruned at the same time. This pruning commences with the stem. It is cut back to the sixth or seventh bud, taking care that the bud to which we cut back is opposite to the one to which the shoot had been shortened at the preceding pruning. The leading shoots of the branches should be cut back to 5 buds; and they should always be cut to a bud pointing outwards, in order that the shoots may form a wide angle with the stem. Young pyramid trees of 5 years from the bud, should appear vigorous and well established in the soil; and to such trees we may commence to apply the proposed method of pruning. If, at the time of the winter pruning, we observe a lateral, situated either on the stem itself or on the branches, and that it is likely to grow too vigorously, give it an outwardly inclined position, by tying its end to a lower branch. Let us also take care to cut close to the bark all those shoots which are situated on the upper side of a branch, as they are apt to become over-luxuriant, and to produce nothing but confusion among the branches. The inclination given to the lateral twigs induces them to form fruit buds in one, two, or more years. When one or two lateral branches is observed growing too vigorously, instead of cutting them off close to the branch from which they proceed, also bend them down like the shoots. The result of this operation is the checking of the too great vigor of the branch on which these lateral branches grow, and the bringing them more promptly into a fruiting state. The bending down of shoots and lateral branches ought, however, to be practised with moderation. On a young pyramid, five years from the graft or bud, there should not be inclined more than two or three shoots and as many lateral branches; for we can never expect to see fruit on either of these in full perfection.

The tree being thus brought into a bearing state, its over-luxuriance will in consequence be checked. After bearing two or three years, the lateral twigs and branches will appear weak, and should then be cut off quite close, and thus do away with the temporary confusion which they occasion among the lower branches of the young pyramid. After the removal of the bent twigs and lateral branches, the branches and vertical stem will be seen furnished with fruit spurs sufficient for the production of as much fruit as the tree will be able to bear; and it is from the fruit spurs so situated that the cultivator may with confidence expect to obtain fruit in full perfection as regards both size and flavor. Presuming that these observations will be readily understood, we may now return to our principal subject.

When the buds have pushed, about the beginning of May, commence disbudding. This consists in removing, with a knife, all badly placed shoots from the branches and stem; so that the shoots on the stem and branches may be at proper distances, and bifurcations prevented. The operation should be continued during the periods when the sap is in greatest flow, which is generally in May and August.

Pinching is done at the same time as the disbudding, and is practised on the lateral as well as other young shoots. The branches of trees worked on the pear stock are stopped or pinched when the shoots have developed six or seven leaves, and always to an eye pointing outwards, and on the side opposite to the vertical stem. As regards trees worked on quince stocks, their shoots are pinched when they exhibit five or six leaves. In order to avoid heels of dead wood, and bruising, the pinching is done between the knife and thumb. This pinching and repinching three or four times, is followed up during the growing season. At the repinching, that is in shortening the shoot pushed by that previously pinched, only three eyes are left. The operation of pinching may be performed on a young tree in a few minutes. It does not extend to the terminal shoots of either the stem or branches; these are left untouched to attract the sap to the different parts of the tree.

At the end of the second flow of ascending sap, or from the 15th to the 25th of September, when there is no longer any danger of the emission of laterals, and when all the flow of sap is towards the extremities of the stem and branches, instead of wasting this valuable nourishment by allowing it to accumulate in the parts which must necessarily be cut away in spring, it is more advantageous to shorten these shoots to the proper length whilst the ascending sap has still sufficient energy to heal the wounds.

After this operation, which is the principle of the method here recommended, one will soon see the effects of the reflux of the ascending sap on all parts of the tree, which will consequently exhibit, at the time of the fall of the leaf, a greater degree of firmness, and more consistence for resisting the rigorous variations of our climate during winter.

In spring the young pyramidal trees, perfectly cleared from insects, with neither cuts nor wounds to heal, and well conditioned in every respect, will set their fruit readily; and, being healthy and vigorous, they will not afterwards drop it. Under the condition abovementioned, the trees, from their strong and active vegetation, will contain sufficient power to enable them to resist the inclement weather to which they are liable in our variable springs.

When the pyramids are about 6 years old, and commence bearing, it will be advisable to defer this shortening of the leading shoots of the stem and branches till after the fruit is gathered. Probably this method of pruning is not applicable to climates warmer than ours; but I believe it may be advantageously adopted throughout England. Practical men, after trying it, could communicate the results through the medium of the *Gardeners' Chronicle;* and such information would be very useful to a great number of amateurs.

Finally, it is by selecting the more vigorous kinds of pear trees, reared on a good system, and planting them with due care in proper soil, by judicious pruning, and by keeping the trees in good condition, that the English amateur will be enabled to obtain, every year, delicious fruits, such as could not be procured even in the markets at any price. If, by my instructions, I could contribute towards the attainment of such desirable results, I should feel highly gratified.

ART. IV. *Descriptions and Engravings of Select Varieties of Apples.* By the EDITOR.

AFTER a period of more than a year, we resume our descriptive list of apples, and, with the opportunity of examining many varieties the present autumn, we hope to continue it more frequently in our next volume, in order to establish some reliable nomenclature in regard to several of the newer apples, as well as to make them better known to cultivators of this valuable fruit. Within a few years several kinds have been introduced to notice, which have proved to be nothing more than old varieties under new names; and many others, which have been highly recommended as new seedlings, will undoubtedly prove not to be so. Every year adds to the long list of names, and it is a difficult task to single out the errors and synonyms, in a satisfactory manner, so variable is this fruit, and so limited the opportunity of investigation. We shall endeavor to describe only such as are familiar sorts, or undoubted new kinds of merit.

LV. KENRICK. Ken. *American Orchardist.*

Kenrick's Autumn. Downing's *Fruit and Fruit Trees.*

Under this name Mr. Kenrick describes a new apple, which he states originated upon his father's grounds in Newton, Mass. Among the multitude of apples its merits have been overlooked, and there are few cultivators who are well acquainted with it. We have never seen it until the present autumn, when Messrs. Ellwanger & Barry, of Rochester, exhibited some fine specimens at the last meeting of the American Pomological Society, and our drawing (*fig.* 27) is made from one of them. Mr. Barry spoke well of it, and, on trial, we think it not only a very good, but a very handsome apple, well worthy of cultivation.

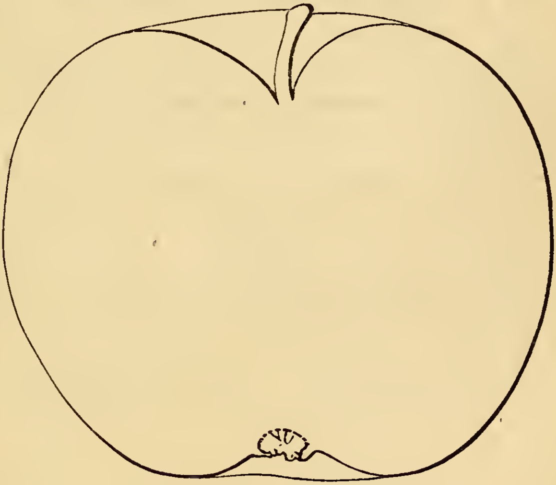

Fig. 27. The Kenrick Apple.

Mr. Kenrick states that the "tree is of medium vigor, compact form, and very productive." Our description is as follows:—

Size, large, about three inches broad, and two and a half deep: *Form*, roundish, regular, narrowing but little towards the eye: *Skin*, fair, smooth, shining, pale green in the shade, dark red in the sun, indistinctly striped with dull crimson, and dotted with conspicuous yellow specks: *Stem*, medium length, about half an inch long, rather slender, and inserted in a moderately deep and open cavity: *Eye*, large, open, and but little sunk in a small very shallow basin; segments of the calyx short: *Flesh*, white, slightly stained with red, little coarse, soft, and tender: *Juice*, tolerably abundant, subacid, and well flavored: *Core*, large, nearly closed: *Seeds*, medium size, sharply pointed. Ripe in October, and keeps some time.

LVI. McCLELLAN. *Horticulturist*, Vol. II.

Some few years since, the scions of an apple under this name (*fig*. 28) were sent to us by Mr. C. Downing, with the remark that it was a fine variety; but we never had an opportunity to taste the fruit till the present autumn, when our friend Mr. E. Newbury, of Brooklyn, Ct., sent us specimens of it, with a promise of more at another opportunity. We scarcely need say we found it all that it had been recommended, being a very sprightly, high-flavored, and truly fine autumn apple.

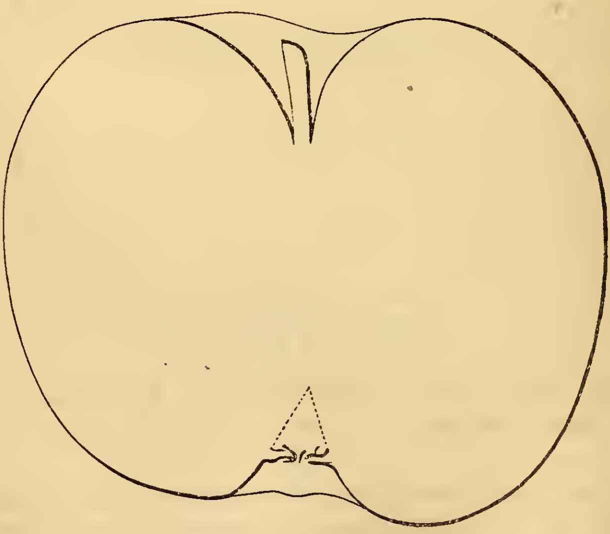

Fig. 28. *The McClellan Apple.*

It seems from the *Horticulturist*, where it was first brought to notice through the exertions of the Rev. Mr. Ramsdell, of Connecticut, that the McClellan apple originated in Wood-stock, Ct., and the original tree (now dead) formerly stood in a "cider orchard," all seedling trees. This orchard was planted seventy-six years ago; but since then, the ownership of it has changed hands several times. About thirty-six years ago, one of the owners, (Mr. John Winter,) presented grafts to his neighbor, Major John McClellan, after whom it has been called, and who now has the tree he first grafted in full bearing. Mr. Ramsdell further states that it is as good a bearer as the R. I. Greening or Roxbury Russet, and "gives crops of fine fruit when the usual apple crop is exceedingly small." The growth of the tree in the nursery is moderate. We do not hesitate to class the McClellan among the best apples, both in beauty and quality.

Size, large, about three and a half inches broad, and three inches deep: *Form*, roundish, nearly regular, being very slightly ribbed at the base, and narrowing little to the crown: *Skin*, fair, smooth, with an oily touch, pale greenish yellow ground, broadly covered with pale red, indistinctly striped with a darker shade, and dotted with some large greenish specks: *Stem*, short, less than half an inch long, moderately stout, and inserted in a broad, but not very deep, cavity: *Eye*, medium size, open, and deeply sunk in a medium sized and abruptly depressed basin; segments of the calyx short: *Flesh*, white, rather fine, crisp and tender: *Juice*, abundant, rich, brisk, and very highly perfumed: *Core*, medium size, open: *Seeds*, small, dark brown. Ripe from October to January.

LVII. King.

Last spring, Mr. J. G. Williams, of Newark, Wayne Co., N. Y., sent us some very large and exceedingly handsome apples under this name, and stated that it was considered by those who knew it in his neighborhood, where it originated, to compare favorably with the Baldwin and other fine kinds. The apples reached us some time in March, and though apparently over-ripe we found them very fine, and, with their size and beauty taken into consideration, a most valuable variety.

Mr. Williams says: "We cultivate several varieties of the New England apples, such as the Baldwin, Roxbury Russet, &c., and the King is superior to them all in flavor; it is equal to the Swaar, and two or three times as large; the apple is one of the very handsomest in color. The trees are of the hardiest character, and bear every year, making a vigorous growth, even when loaded with fruit. They soon outgrow all other trees in the orchard."

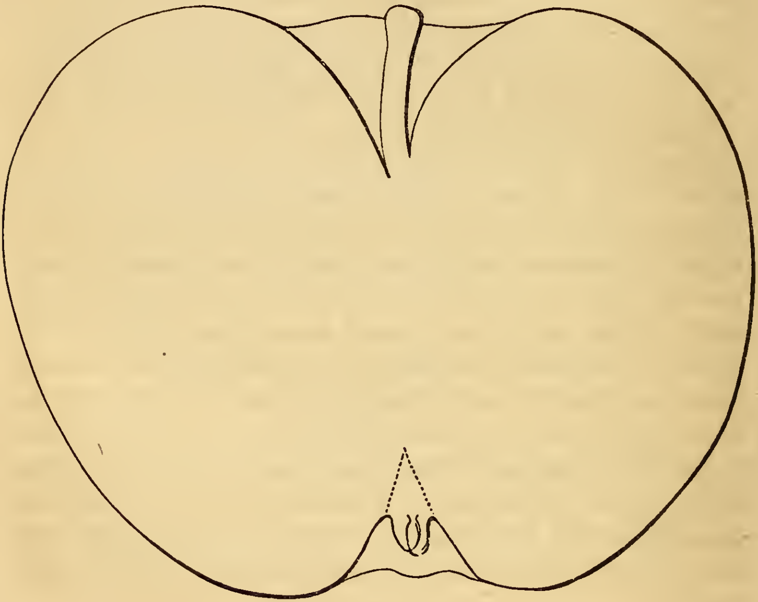

Fig. 29. The King Apple.

Some magnificent specimens of the King (*fig.* 29) were shown last month at the New York State Fair, and at the Connecticut State Fair, which attracted much attention. Altogether, we think it a fine acquisition.

Size, very large, about four and a half inches broad, and three and a half inches deep: *Form*, roundish, broad, flattened at the base, slightly ribbed, and narrowing to the crown: *Skin*, fair, smooth, with a rich yellow ground, distinctly striped with orange red, and splashed with deep crimson, and rather thickly dotted with large conspicuous yellow specks:

Stem, short, about half an inch long, rather stout, and moderately inserted in a large, open, broad cavity: *Eye*, medium size, closed, and deeply sunk in a rather large, and much furrowed basin; segments of the calyx long, woolly: *Flesh*, yellowish, little coarse, crisp and tender: *Juice*, abundant, pleasantly acid, and high flavored: *Core*, large, nearly closed: *Seeds*, medium size, reddish brown. Ripe from December to March.

Art. V. *Floricultural and Botanical Notices of New and Beautiful Plants, figured in Foreign Periodicals; with descriptions of those introduced to, or originated in, American Collections.*

Victo`ria re`gia.—This noble aquatic is now in full flower in Mr. Allen's new house in Salem, where all amateurs may have an opportunity to see it. Since our last notice of it, three or four flowers have opened in great beauty, and in the more roomy tank where it is now growing, it shows off to great advantage. Probably several more flowers will open before cold weather.

Ci′ssus di′scolor.—This unique plant, so remarkable for the beauty of its variegated foliage, has been finely grown in several collections. Messrs. Hogg of New York, and Mr. Rauch of Brooklyn, had fine specimens at the show of the New York State Fair; and Mr. Wilder had a splendid specimen at the last annual exhibition of the Massachusetts Horticultural Society, which we have already noticed. It should be cultivated by every body possessing a greenhouse.

Lanta`na delicati′ssima.—This is a new and pretty species, admirable for bedding out, on account of its prostrate habit. The flowers somewhat resemble Sellowi, though of a deeper and richer rosy lilac shade. L. delicatíssima, of some collections, has white flowers; to which plant the name belongs we are uncertain.

New Fuchsias.—Quite an improvement has been made in the newer varieties of this fine flower; the sepals, which, in the older kinds, covered to a great extent the corolla, now reflex back in such a manner as to show the latter to the best advantage. Several new sorts have flowered and are still flowering in our collection, which have been the admiration of all who have seen them; they are as follows:—

England's Glory. Light sepals and vermilion corolla.
Incomparable. Light sepals and carmine corolla.
Joan of Arc. Light and rose.
Duchess of Lancaster. Light and rose.
Collegian. Dark sepals and violet purple corolla.
Perfection. Orange red sepals and crimson purple corolla.
Glory. Dark red sepals and black purple corolla.
Nil Desperandum. Red sepals and dark crimson corolla.

SALVIA LILLEA'NA.—This is a new and very pretty blue-flowered variety of the Salvia. It has small linear foliage, and racemes of small pale blue flowers. As a bedding plant it is a fine acquisition.

249. GENTIA'NA FORTU'NI *Hook.* MR. FORTUNE'S GENTIAN. (Gentiàneæ.) China.

A half hardy or hardy plant; growing two feet high; with deep blue flowers; appearing in spring; increased by division of the roots; grown in peaty soil. Bot. Mag., 1854, pl. 4776.

A "charming species," a native of Northern China, (the exact locality is not stated;) sent by Mr. Fortune, in 1849, to Messrs. Standish & Noble, of the Bagshot nursery, where it flowered last year. Notwithstanding the many fine species of Gentian which have been introduced to England, including our beautiful G. crínita, it is stated that "the present equals if it does not excel in beauty all that have yet been described." It is a tall and robust growing species, with distinct foliage, and large flowers of the deepest blue, the inside of the corolla spotted with white. As it came from the north of China, it will probably prove a hardy plant in our climate; if so, it will be a fine acquisition. *(Bot. Mag.*, April.)

250. CERATOSTE'MA LONGIFLO'RUM *Lindl.* LONG-FLOWERED CERATOSTEMA. (Vaccíneæ.) Peru.

A half hardy plant; growing about a foot high; with scarlet flowers; appearing in summer; increased by cuttings; grown in leaf mould, peat and loam. Bot. Mag., 1853, pl. 4779.

A splendid ericaceous plant, discovered by Mr. Lobb on the Andes of Peru, at an elevation of 12,000 feet above the level of the sea, and sent to Messrs. Veitch of Exeter, in whose collection it flowered in 1853, and was exhibited at the summer show of the London Horticultural Society, where it attracted much attention. The plant has an upright, neat habit, with small oval, coriaceous leaves; and the flowers, which are disposed on the ends of the smaller shoots, are long, between urceolate and cylindrical, scarlet, merging into yellow at the apex, exceedingly showy, and beautiful. It is well worthy of general introduction into all greenhouse collections. (*Bot. Reg.*, April.)

251. DESFONTA'INIA SPINO'SA *Ruiz and Pavon.* HOLLY-LEAVED DESFONTAINIA. (Solàneæ?) Valdivia.

A greenhouse shrub; growing two or three feet high; with scarlet and yellow flowers; appearing in spring; increased by cuttings; grown in leaf mould, loam and peat. Bot. Reg., 1853, pl. 4781.

"A most lovely plant, with perennial, glossy, holly-like foliage, and flowers often two inches long, rich scarlet, tipped with yellow." It is another of Mr. Lobb's acquisitions, who found it at Valdivia, and sent it to Messrs. Veitch, who exhibited it at Chiswick in 1853. It is a very great accession to our gardens, and quite unique in its character, its place in the natural system being a puzzle to botanists. If we take a fine healthy specimen of the holly and clothe it with long funnel-shaped, drooping, brilliant scarlet flowers, a good idea of the Desfontainia may be obtained. If its cultivation does not prove difficult, it will become a general favorite. (*Bot. Mag.*, May.)

252. IMANTOPHYLLUM MINIA'TUM *Lindl.* BRICK-COLORED IMANTOPHYLLUM. (Amaryllidàceæ.) Natal.

A greenhouse bulb; growing one foot high; with red flowers; appearing two or three times a year; increased by seeds and offsets; grown in light rich soil. Bot. Mag., 1854, pl. 4783.

A very large and splendid plant, allied to Vallota, producing large heads of deep orange red flowers. It seems to be the type of a new genus, to which the present name has been transferred from another plant, now known as Clívia nóbilis. It is a very showy bulb. Messrs. Backhouse of York, in whose collection it flowered, state that for two years the old root has produced a flower stem about every four months. *(Bot. Mag.*, May.)

253. Hexace'ntris Mysore'nsis *Wight.* Mysore Hexacentris, (yellow-flowered var.) (Acanthàceæ.) Mysore.

A greenhouse climbing plant; growing several feet high; with yellow flowers; appearing in spring; increased by cuttings; grown in light rich soil. Bot. Mag., 1854, pl. 4786.

A new plant, which has attracted great attention at the Chiswick exhibitions the last two years. It was introduced by the Messrs. Veitch, who received the seeds from the Botanic Garden of Ootacamund, where they were received probably from its native locality, viz., Nuggar in Mysore. It is a climbing plant, with very long slender branches, everywhere glabrous: leaves opposite, three to four inches long; racemes of flowers long, pendent, terminal, on short leafy branches; flowers large, bright yellow. It is a fine companion to the Stephanotus, Allamandas, Dipladenias, &c., and, like them, deserving every attention for its extreme beauty. *(Bot. Mag.*, June.)

254. Scutella'ria villo'sa *Hook.* Shaggy Skull-cap. (Labiàteæ.) Peru.

A stove plant; growing two feet high; with scarlet flowers; appearing in spring; increased by cuttings; grown in light rich soil. Bot. Mag., 1854, pl. 4789.

A new species, allied to S. cordifòlia, with large scarlet flowers, and more or less cordate leaves, covered with long spreading white hairs. It flowers in the early spring months, and Dr. Hooker considers it a "great acquisition to our collections." *(Bot. Mag.*, June.)

255. Rhodode'ndron cinnabari'num var. pa'llidum *Hook.* Cinnabar-flowered Rhododendron; pale var. (Ericàceæ.) Sikkim-Himalaya. *Bot. Mag.*, 1854, pl. 4788.

Another of the Sikkim Rhododendrons, which flowered at Kew in May of the present year (1854), in a cool greenhouse. This species is a native of Eastern Nepal, in valleys, and on the tops of mountains in very damp regions, and at elevations above the sea level of 10,000 to 12,000 feet; there it forms an elegant bush, about eight feet high, conspicuous in May and June from its elegant blossoms, which form very loose and graceful heads of long pendulous flowers. The flowers of this variety are of a deep rose color. As all the Sikkim Rhododendrons will probably prove hardy south of Philadelphia, any information about them will prove interesting to lovers of this fine tribe. (*Bot. Mag.*, June.)

ART. VI. *Notes on Gardens and Nurseries.*

OATLANDS, HEMPSTEAD, L. I., THE RESIDENCE OF D. F. MANICE, ESQ.—A recent visit to New York enabled us to accompany Mr. Manice down to his beautiful residence at Hempstead, a full description of which we gave some time since, (Vol. XV, p. 529.) Since then, now five years, the trees and shrubs, many of which had only been planted a year or two, have grown up to a large size, and materially alter the general appearance of the grounds, giving it that character which age alone can give to residences of such extent.

The main attraction at the present time to us, was Mr. Manice's water works, which he has fully completed at an expense of nearly ten thousand dollars. At the time of our previous visit he had commenced this work, and partially completed it; but he has since distributed the water throughout his grounds, supplied his house, constructed two fountains, and a beautiful lake directly in view from the lawn front. His manner of raising the water was with a wind mill, but this was demolished by too strong gusts, and then a steam pump was resorted to, until he could repair his loss. He has now one of the most perfect mills we have ever seen, of great power, and so arranged as to be self-acting, somewhat in the way of Halliday's new mill. It is so braced and constructed that no wind can injure it, and it works with perfect ease. In such a dry summer as the one just past, every cultivator must almost envy Mr. Manice the possession of such a means of counteracting drought; for, with the quantity of water at command, any part of his grounds can be thoroughly watered, merely by attaching hose to pipes distributed through all the main walks of the flower, fruit, and kitchen gardens.

We had but little time to devote to an inspection of Mr. Manice's place, but enough, however, to see the order and neatness in which it is kept. The lawn was closely shaven and smooth, the walks clean and well rolled, and the flower garden, though late in the season, well stocked with the choicest bedding plants, roses, &c. The fruit had all been gathered, what little there was, from the pear trees, but the trees themselves were in fine order, and border all the walks in the fruit garden, being mostly pyramids. The strawberry beds were as fine as any we have ever seen, and promise a great crop next year.

In the graperies, there were yet two houses from which very few grapes had been cut, and we have rarely seen finer fruit. Mr. Parnell, Mr. Manice's gardener, certainly manages the houses well. The Muscats were well set, and the berries of fine size.

Mr. Manice spares no pains to test every new mode of cultivation which has any promise of success; and he is now experimenting on the southern system of making the strawberry a perpetual bearer, at least during the summer, after Mr. Peabody's plan, of Columbus, Ga. He has had a bed excavated, filled with prepared soil, and so constructed that he can irrigate with water at pleasure, or have it quite dry. We shall await with interest the result, and, if successful, for a full detail of his mode of practice, which we trust we may have the pleasure of laying before our readers.

The fig is a favorite fruit with Mr. Manice, and we noticed before his mode of fruiting the trees. He is now about to grow them in brick pits, with the plants set in the ground, and the lights put on as soon as the weather becomes cool; we think he will succeed with his plan, and we recommend it to all who love this luscious fruit.

We have already given an account of the mode pursued here of growing the plum, viz., of enclosing the trees with a high fence, and paving the ground beneath them; but Mr. Manice informed us that this had been a total failure, and he had come to the determination to try some other way. The curculio was nearly or quite as destructive to the fruit as if no paving had been done. Our brief visit prevented us from taking notes of many other things, more particularly Mr. Manice's fruit room, its construction, &c.; but at another time we trust we may have the opportunity to add what we have omitted now. Oatlands, setting aside its rather too level situation, is one of the finest places in the vicinity of New York.

Nursery of Messrs. Hogg & Son, Yorkville.—A spare half hour was all we could devote to a visit here. As usual, we found a well stocked collection, embracing many new things. The usual confusion attendant upon removing the plants from their summer quarters to their winter one, prevented us from seeing everything, yet enough to learn that this old establishment keeps up its character for fine plants. Among other varieties, we noticed several of the Sikkim Rhododendrons, which may some of them prove hardy around New York. That fine running plant, Schubért*ia* graveòlens, flourishes finely turned out into the border in summer; even after the cool nights, nearly down to the freezing point, it was trailing over a tall stake, and full of bloom. A fine young stock of evergreens was coming on, and among them a quantity of the handsome Tórrey*a* taxifòlia, the old tree of which, here, is now ten feet high, and very beautiful. Among the newer plants we saw Lantàna delicatíssima, rosy lilac; Císsus discolor, the unique variegate-leaved plant; *S*álvia gesneræfòlia, Balsámia Hooker*i*, &c. Messrs. Hogg possess a capital stock of Orchids—the best, we presume, anywhere among our nurserymen; these elegant plants are gradually becoming better known and appreciated, and we think, ere long, that they will become great favorites with lovers of choice plants.

The whole collection appeared in fine order.

[Since writing the above, we have been grieved to learn of the sudden death of Mr. T. Hogg, senior, which took place only a day or two after our visit. We reserve any further notice until our next.]

REVIEWS.

ART. I. *Victoria regia; or the great Water Lily of America. With a brief account of its Discovery and Introduction into Cultivation;* with Illustrations by WM. SHARP, from specimens grown at Salem, Mass., U. S. A. By JOHN FISK ALLEN. Large elephant folio: pp. 16. Boston. 1854.

It is with feelings of pride as well as pleasure that we bring this beautiful work to the notice of our readers. With feelings of pride that our own country should have produced a volume superior in its illustrations to Dr. Hooker's elegant folio on the same subject—and feelings of pleasure that an amateur cultivator has been found among us who would undertake such a task as Mr. Allen, and carry it successfully through. Fortunate indeed has he been in securing the services of such an artist as Mr. Sharp, and still more fortunate in availing himself of his skill in chromolithography, for no other person we are certain could execute the plates in such superb style.

A few years since, when the first No. of our *Fruits of America* was published, it was seriously announced that the chromolithographic art was incapable of producing satisfactory colored plates of either fruits or flowers; we believe such a fanciful notion has been nearly or quite dissipated by the truthful drawings in the numbers of that work which have subsequently appeared; if they have not, a single glance at Mr. Allen's Victoria regia, will satisfy the most sceptical. Not only are the plates superior to those in Dr. Hooker's work, but by no other means than that of chromolithography could they be presented to the public at a price within the reach of any but the most wealthy. We congratulate both the author and artist on the faithful manner in which they have completed this magnificent folio.

It is unnecessary to go into any detail of the descriptive portion of the volume. The history and introduction of the lily are given in full, and the mode of cultivation as well as the various transformations of the blooms minutely described.

The plates are illustrative of the plant from the age of three weeks up to the period of full bloom.

Plate I. represents young plants at the age of three to six weeks; II. Opening flower; III. Under side of leaf; IV. Intermediate stages of bloom; V. Complete bloom; VI. View of a particular form of the flower.

Plate 3d, (the underside of the leaf,) is not only a perfect representation of its beautiful mechanism, but a specimen of elaborate work rarely attempted to such an extent; fully as wonderful as the flower itself, this accurate plate will convey a perfect impression of the structure of the leaf.

All who appreciate a beautiful book should possess Mr. Allen's Victoria regia; next to possessing a plant in its full growth, is the acquisition of this volume. It is always advisable, says Mr. Allen in conclusion, "to obtain a view of the living plant, but many cannot do this;" and those who have not the opportunity, by the aid of this treatise may, in their own parlor, (without being subjected to the unpleasant heat of the lily house,) contemplate the changes of leaf, bud and flower; "to witness which, in its native or artificial waters, days of exposure to a tropical climate must be endured."

ART. II. *First Lessons in Chemistry and Geology, as adapted to Agriculture, designed for the use of Schools.* By J. EMERSON KENT, A. M., M. D. 12mo. pp. 108. Boston. 1854.

A useful and very complete little manual, designed, as the author states in his preface, "for use in the common schools of our widely-extended and agricultural country. It has been the especial aim of the author to make it interesting as well as instructive, and, for the attainment of that purpose, a series of simple and in some cases brilliant experiments have been introduced."

The author then proceeds to treat upon the Constituent Nature of the Productions of the Soil, and explains the qualities of Carbon, Hydrogen, Oxygen, Nitrogen, Potash, Soda, Lime, &c. &c., illustrating them with experiments as simple as they are pleasing, and readily performed by any young scholar with the aid of an oil-flask, a spirit-lamp, a few tumblers, glass tubes, retort stand, &c. The Food of Plants is the next chapter; then the Substances of Plants; the Substances which form the Soil, &c.

The little volume is a valuable book, which every farmer should place in the hands of his children.

MISCELLANEOUS INTELLIGENCE.

Art. I. *General Notices.*

Vallota purpurea.—There are few plants so showy and useful as this which are so suitable for amateurs, or persons possessing but limited accommodation for plant growing. It is more beautiful than many varieties of Amaryllis, while it is not nearly so troublesome to manage; and its fine umbels of bright colored flowers last in perfection for weeks in a cool greenhouse.

It is easily propagated by means of offsets, which are produced freely on established plants. These should be taken off before growth commences in spring, and planted in separate pots, putting one or more into a pot just sufficiently large to conveniently admit the roots, according as the object may be to increase the number of the plants, or to have useful-sized specimens for flowering as soon as possible. After potting, they should be placed in a close pit, and sparingly supplied with water at the root, sprinkling them over-head morning and evening in fine weather, until they emit fresh roots, when a free supply should be given at the root. When fairly established after potting, which will soon be the case, the plants should be placed near the glass and freely exposed to air on every favorable opportunity, affording them a temperature of about 50° at night, and allowing it to rise 10 or 15° with sun heat. As soon as the pots are well filled with active roots, shift into others some two inches wider. During the warm months of summer, the plants will do very well in a close part of the greenhouse or a cold frame; the latter, however, will be the most suitable, as the atmosphere can be kept more moist, and the plants will make finer and more robust foliage here than in the greenhouse. Whether flowers will be produced the first season or not will depend upon the age and strength of the offsets, for unless these are strong when taken off, they will not flower the first season. But as the Vallota flowers under ordinary treatment towards September, and this without any particular means being used to induce it to do so, beginners cannot do better than treat their plants well during the growing season, exposing them freely to sunshine after the beginning or middle of August; and if they do not bloom the first season, they will be sufficiently strong to do so the second. The plant should be more freely exposed to air as winter draws on, and the supply of moisture, both at the roots and in the atmosphere, should also be gradually decreased; for although it may be dried off and allowed to lose its foliage in winter, as is sometimes done, it does better when not allowed to quite die down. Therefore the plants should be wintered in an airy part of the greenhouse, and be very sparingly supplied with water, giving just enough to preserve the foliage in health.

Towards the middle of March the plants should be encouraged to make growth, by removing them to a close pit, or the warmest part of the greenhouse, and gradually increasing the supply of moisture. The same treatment as already recommended will be suitable during the growing season, except that repotting will probably be unnecessary, for the Vallota flowers more profusely when not over-potted, and, of course, the plants should be placed in a dry, airy, cool atmosphere while in bloom, in order to preserve the beauty of the flowers as long as possible. If large masses are desired without loss of time, however, a moderate shift should be given in spring to such as have bloomed the previous season, until they are in 12 or 15-inch pots, which will be sufficiently large to grow splendid masses. And as it is not desirable to break up the plants oftener than can be avoided, the offsets should be removed occasionally from established masses, taking care to disturb the flowering bulbs as little as possible, and weak manure water given during the growing season will assist in preserving the vigor of such as have been grown for several seasons in the same pots. But the Vallota will flower finely in 8-inch pots, and those whose accommodation is not suitable for large specimens may, with kindly treatment, bloom it profusely for two or three years in this sized pot without breaking up or shifting. When it is deemed advisable to break up the specimens, in order to afford them fresh soil, which will be necessary occasionally, this should be done just before starting them into growth in spring, and care should be taken to injure the roots as little as possible, and very little water should be given after breaking up and repotting, especially in the case of large pots being used, until growth commences, as a too free supply, while the roots are inactive, would tend to sour and ruin the soil.

A compost consisting of about one half turfy loam, one third good rich peat, and the remainder decayed leaf soil, well intermixed with a sufficiency of sharp sand, will be found to answer perfectly for the growth of this plant. In potting, care should be taken to secure perfect drainage, and this should be effected by the careful arrangement of a moderate quantity of crocks, and not by half filling the pots with them.—(*Gard. Chron.*, 1854, p. 564.)

Double Primulas.—These are amongst the most useful subjects for winter decoration which we possess, and should be extensively cultivated wherever winter plants are in request. With proper management they grow freely enough, and produce a profusion of their pretty blossoms from November till March, or even longer. Unfortunately, however, they are rather delicate subjects, and although they are found growing vigorously and flourishing about some places, they are still comparatively scarce, and many amateurs complain that they can do no good with them. I will begin with their propagation, which, owing to the cuttings being very apt to damp off, is somewhat difficult; indeed, I have known many parties lose their whole stock through inability to propagate them. Good strong robust plants should be selected to furnish cuttings, and these should not be allowed to flower too long, but the flower stalks should be cut off before the plants show any symptoms of exhaustion, removing them to a rather warm situation to encourage free growth. As a general rule, the plants should be divested of their flowers from the middle of February to the middle of March, for if placed in heat earlier, unless a dry atmosphere can be commanded, they will be liable to damp off, and, without careful attention to shading, they will not be found to grow so freely after the sun becomes powerful. The plants must be narrowly watched after placing them in heat, keeping them as moist as can safely be done, but they should not be syringed too freely over head, for if damp once makes its appearance, it will be difficult to check it without removing the plants to a cool dry atmosphere, which would check their growth, and cause a serious loss of time. If the pots are well filled with roots, a small shift may be given with advantage; but if, as is more commonly the case, the plants are over-potted, they should be turned out of the pots carefully, clearing away all unkind soil, and repotting in pots just sufficient to admit the roots with a very small portion of fresh soil. Under any circumstances water must be very carefully supplied, giving just enough to keep the soil in a healthy state; and if any indications of damp are perceived on the foliage, or about their neck, then give water by means of a saucer, and allow the surface soil to get quite dry. With anything like proper management, however, the plants will grow very freely, and will soon furnish an abundance of cuttings. When the young shoots become moderately firm, which will be known by the stems changing color, these should be cut off close to the main stem by means of a sharp knife, leaving a few shoots so as to make sure of saving the old plants, and after cutting off a pair or two of leaves, if necessary, and allowing the cuttings to lie for a night in a rather dry place, insert them in sharp clean sand in small well-drained pots or in pans, as may be most convenient, and plunge in a dry bottom heat, covering with a hand-glass. Guard against condensed moisture, by removing and wiping the glass dry as often as may be necessary, and give a little air occasionally. Water only when this is unavoidable, and leave the glass off afterwards to allow the superfluous moisture to escape. As soon as the cuttings are fairly rooted, begin to inure them to free exposure to the atmosphere of the house, and move them near the glass to prevent weakly growth. The best situation in which to grow the plants after the weather becomes warm is a close pit or frame, which can be kept close and warm, and managed according to the wants of the plants, but they will do in a close part of the greenhouse, or in the cool end of the stove. Attend to shifting as the roots are found to require more space, but avoid large shifts, or repotting before it is wanted, for the plants will be found to do better under than over potted. Also shade slightly on bright days, and maintain a moist atmosphere by sprinkling the floors, &c., morning and evening, and if the foliage shows no indications of damp, the plants may be syringed lightly overhead every fine afternoon. All this, however, should be regulated according to the state of the plants, giving them as much warmth and moisture as they will bear without damping off, or making weakly growth. The flowers must be removed as they make their appearance as long as the object is to increase the size of the plants; and when it is intended to allow them to bloom they should be gradually inured to the temperature of the ordinary flower-house, taking care not to place them in the way of currents of cold drying air, when they are removed there. Those who are anxious to produce large specimens should select some late propagated plants, and prevent their flowering the first winter, by pinching off the flowers as they make their appearance, keeping them, during the winter, in a close part of the greenhouse, or cool part of an intermediate house. They should not be placed in heat in spring, as recommended for plants intended to furnish cuttings, but should be kept in a nice equable growing temperature. The side branches must be carefully secured by means of stakes before they get so large as to endanger their being broken off, and great care must be observed with these to keep the soil in a proper state as to moisture. Plants that may not be wanted to afford cuttings after flowering, should be kept rather cool and dry for a time after blooming, and the flowers should be picked off immediately any indications of exhaustion are perceived; for unless this is attended to, they will flower themselves to death. After allowing them a month or so to recruit their energies, examine the state of the roots, and reduce the ball or shift into larger pots, as may be proper. A mixture of about equal parts good fibry peat, loam, leaf-soil, thoroughly decayed cow-dung, and sharp sand, will form a suitable compost. In potting, make the fresh soil rather firm about the ball, and secure perfect drainage by a liberal use of potsherds, and thoroughly intermixing the sand with the soil.—(*Gard. Chron.*, 1854, p. 664.)

Double Flowers.—What mistaken means are employed for obtaining these, and how many erroneous circumstances are, up to this very day, says the Revue Horticole, admitted to explain the cause of doubleness in certain flowers! Thus, for example, many gardeners pretend that to obtain double Brompton stocks, you must gather the seeds exclusively from those flowers which are the most double. What influence can these flowers have when entirely deprived of all organs of generation? None whatever. To explain this phenomenon, we must make practice agree with theory. Every gardener who sows seed, wishes to obtain plants with double flowers, so as to obtain blossoms which produce the greatest effect. Every double plant is a monstrous vegetable. To produce this anomaly, we must attack the principle of its creation, that is to say the seed. This being granted, let us examine in what way these seeds ought to be treated. If, after having gathered the seeds of Malcomia annua, or Ten-weeks' stock, we sow them immediately afterwards, the greatest number of the seedlings will produce single flowers, whilst, on the contrary, if we preserve these same seeds for

3 or 4 years, and then sow them, we shall find double flowers upon nearly all the plants. To explain this phenomenon, we say, that in keeping a seed for several years, we fatigue it and weaken it. Then, when we place it in a suitable soil, we change its natural state, and from a wild plant make it a cultivated one. What proves our position is, that plants, in a wild state, shedding their seeds naturally, and sowing them as soon as they fall to the ground, yet in a long succession of time scarcely ever produce plants with double flowers. We think then, after what we have said, that whenever a gardener wishes to obtain double flowers, he ought not to sow the seeds till after having kept them for as long a time as possible. This practice ought to be observed with all plants that we wish should produce double flowers, for all varieties of the Brompton stocks, Ten-week stocks, and others of the same kind, there is no doubt that to flower them well they should be sown in autumn in well-worked soil, taken up when the cold weather comes, and kept under a frame during the winter. In the spring they may be planted out again, when they will flower magnificently, and yield an abundant harvest of seeds. If you have not a frame at your disposal, you may obtain the same result, by sowing the seeds at the end of February, under a south wall, for example. The principles that we have admitted above are just as applicable to melons and all plants of that family. We admit, like many other observers, that melon plants obtained from seeds the preceding year ought to produce, and do produce, really very vigorous shoots, with much foliage; but very few fruitful flowers appear on such plants; whilst, on the other hand, when we sow old seeds, we obtain an abundance of very large fruit. In fact, in all varieties of the melon the seeds should always be kept from three to eight years, before being sown, if we would obtain fine fruit, and plenty of it.—(*London Floricultural Cabinet, February,* 1847.)

Tulips.—Examine the bulbs, and, if not previously done, let them now be arranged for planting, making the alterations and improvements noted down in your Tulip book during blooming time: this I do immediately the bulbs are taken up, while the changes intended to be made are fresh in the memory; I also procure at once any new varieties I may wish for, and then rearrange them. The bed should now be got ready for planting. If the soil has only been in use one year, and the bulbs have done well in it, there is no advantage to be derived from changing it, for they will do well in the same soil (if it be good) for two or three successive years; all that is required is to remove about 3 inches from the surface, laying it in a ridge by the sides of the bed; then fork over the mould left in the bed, laying that also in a high ridge for a week or 10 days. If the soil requires changing, it need not be all removed. About a fortnight ago, I took nearly 10 inches off the top of my bed, then I put about 6 inches of two-year-old rotten turf and loam and road grit, well mixed together, (three fourths loam and one fourth grit,) on the soil left in the bed, forked it well over two or three times, turning some of that left with the mould just added, so as to mix it well, and laid it up in a high ridge; two or three days before planting, this is raked down, laying it 2 inches higher in the middle than the sides. In planting, I place a small quantity of river-sand on the spot the bulb is to occupy, and put as much sand upon the bulb itself as will just cover it; then I carefully put the mould on the bed, covering the bulbs 4½ inches deep in the centre, and 3 inches the outsides; I protect the bed at once by placing small-sized iron hoops over it, rising about 6 inches from the surface, and run some small string diagonally between the hoops. About the second or third week in the present month is the best time for planting in general, though, on account of the lateness of situation, I never plant later than the first, if the weather will allow it to be done. The best plan is to begin planting whenever the bulbs push forth their green spear, and the fibres swell at the bottom of the root (some of the early blooming varieties are already doing so,) for the longer they are kept out of the ground when this is the case the greater injury they sustain. I have never used the nostrums some have recommended, but have strictly adhered to the simple practice described above; and perhaps I may be permitted to say that my blooms have always given me the greatest satisfaction.—(*Gard. Chron.*, 1854, p. 647.)

Japan Lilies.—Few plants are more useful than the different varieties of Japan Lilies. They come into bloom at a time when our New Holland plants are over, and when an actual paucity of flowering plants exists, wherewith to decorate the conservatory and greenhouse; and what really can be more suitable? They produce a gorgeous display either in-doors or out; and as they are quite hardy they may be liberally planted in the open borders; they thus constitute one of our best autumnal flower garden plants. Their propagation is simple and certain. The bulbs may be separated, and each scale will eventually form a new bulb. This separation should be effected when the flower stems are withered; the scales should be stuck into pans of silver sand, and placed in a cold frame or pit. After remaining one season in this position, they should be planted in a prepared bed of peat soil, and a little silver sand intermixed with it; thus treated the bulbs will soon grow large enough to flower. The cultivation of them in pots is by no means difficult. Immediately when the bulbs go to rest in the autumn is the proper time to repot them. By no means destroy the old roots, but carefully place them amongst the fresh soil. If large examples for particular display are required, large pots may be employed, and half a dozen large flowering bulbs placed in each pot. The soil I use is rough peat. The pots should be well drained, and the crowns of the bulb just covered with the soil; when potted they should be placed in a cold pit or frame, in order to prevent the soil from freezing, although frost will not injure the bulbs. Where room under glass is an object in winter, they may be plunged in the open air in coal ashes, in a manner similar to potted hyacinths. I have at this time a large number in flower, which have never been under glass until within these few days; they have sustained no injury from exposure. There is scarcely any plant which is so much benefited by liquid manure as the lily, more especially before expanding its flowers. If used in a clear state, and considerably diluted, this water alone may be applied for at least a month before it comes into flower. If the object should be out-door cultivation entirely, I should recommend them to be planted in beds; their effect is exceedingly grand. Excavate the soil 18 inches deep, and fill in the bottom a foot deep with very coarse peat, intermixed with one fifth of decayed manure or leaf-mould. The remaining 6 inches may be entirely peat. If the bulbs are large enough to bloom, plant them 12 inches apart every way, and if beds of each kind are well contrasted one with the other the effect will be magnificent.—(*Ibid.*)

HOYA BELLA.—To have this charming little Hoya to perfection, it requires plenty of warmth and moisture while growing, good drainage, and a free open soil. The latter should consist of equal parts good fibrous peat, leaf-soil, and sand, well mixed together, to which may be added a tolerable portion of clean potsherds, broken small, and a few pieces of charcoal. The pots used should be drained from 1 to 2 inches in depth, according to their size. The peat should be broken up with the hand, but not sifted.

Presuming that young plants are obtained in spring, they should be placed in a stove or pit, where a temperature of from 65° to 70° is kept up. Under such circumstances they will grow freely, and will soon require shifting into larger pots. Shade slightly during bright sunshine, and water when necessary; but with a sufficiently moist atmosphere, and a moderate use of the syringe on favorable occasions, but little will be required at the roots, heavy drenches of water being prejudicial to them. As they progress, the leading shoots should be stopped, in order to induce the formation of more numerous branches, which should be spread out and arranged so as to make a neat specimen. If by the middle or end of June the plants are still growing freely, another shift may be given and the same temperature maintained. When they begin to cease growing, which they should be encouraged to do early in autumn, they should be placed on a shelf near the glass to ripen their wood, and a drier atmosphere should be maintained; they may be kept here during the winter, provided the temperature is not higher than 55° or 60°; during that season just sufficient water will be required to preserve the foliage in health.

Early in January, or a little later, as may be convenient, the plants should be cleaned, top-dressed, and placed in a growing temperature as before directed, keeping the atmosphere moist, to induce them to break freely. When they have broken well, if large plants are desired, they may be shifted and grown on; but, if intended for flowering, it is preferable to defer shifting, as they bloom most freely when slightly pot-bound. The flower buds will make their appearance as the young shoots progress; and, when commencing to expand, a drier atmosphere, and a somewhat cooler temperature will prolong the duration of the flowers. If well attended to during the summer, the wood will be perfectly ripened by the time the flowering is over, and the plants may be wintered as before. If it is necessary to prune them back it should be done a few weeks before starting them, in order to allow time for the wounds to heal over before growth has commenced.

This plant has a fine effect, either planted out or plunged in a basket of moss, and suspended from the roof of a stove or orchid house. In this way the flowers show themselves to advantage; and if the plants are kept moist while growing, and otherwise well treated, they will last for several years in perfection.

Cuttings made of the young shoots root freely; insert them in sand, cover with a bell glass, and place them in a temperature of 70°, where there is a gentle bottom heat. When rooted pot them off singly into two or three inch pots, and place them in a close warm situation; if rooted early they will make strong plants by autumn.—(*Gard. Chron.*, 1854, p. 500.)

GOOSEBERRY CATERPILLARS.—The ravages of the gooseberry caterpillar may be prevented by one or two timely dustings of hellebore powder applied with a dredging-box when the bushes are quite dry. This remedy is neither expensive nor troublesome, and I have never known it to fail. I only know of one better plan, and that is to place a coop or two of young cochins amongst the bushes as soon as ever the caterpillars appear. If any of the latter have already ascended the bushes, brush them carefully off and crush them; and depend upon it the chickens will allow no more to ascend. No fears need be entertained of their scraping propensities when under six or eight weeks old, and they will not travel far from their coop; but should there be any cabbage or lettuce plants in their immediate vicinity, they, as well as the caterpillars, will quickly disappear.—(*Ibid.*, p. 469.)

ART. II. *Domestic Notices.*

"OUR NEGLECTED AMERICAN TREES."—CELTIS OCCIDENTALIS.—Dear Sir,—As a fellow laborer in the same field, your remarks under the above quoted caption gave me much pleasure. On one of those you have noticed I desire to make a few further remarks,—*Celtis occidentalis.* In every case that I have had an opportunity of examining, the berries of this tree are of a *deep yellow*, or, when somewhat exposed to the light, *orange brown;* and every botanist with whom I have had conversation on the subject, assures me, that this is also in perfect keeping with his experience. Yet every author that I have consulted, from Willdenow downwards, describes them as *purple*, and in some figures that I have seen, the representation is more like some species of elm bearing sassafras berries, than like the real tree "as we understand it." In my "Hand-Book of Ornamental Trees" I have slightly alluded to this confusion of ideas; and, as you remark in your notice that the plant has "small purple berries," it occurred to me as a most excellent opportunity of having this matter clearly explained. It has always seemed to me unaccountable that such a difference should originate in a mere mistake. I have endeavored to lead myself to suppose that there may be in some States varieties with purple berries, differing from our kind in no essential particular; and as our *C. crassifolia* is so much like our *C. occidentalis* that it requires almost the same kind of observation as enables us to distinguish a Duchess d'Angouleme or Seckel pear tree from a Glout Morceau or Maria Louise, rather than genuine botanical characters, to tell them apart from each other, my supposition often seems the more probable. It would much interest us in this region, if you or some of your friends would give an accurate description, through your pages, of *your* native species. I enclose you a few berries of *our* kind.—*Very sincerely yours*, Thomas Meehan, *Germantown, Philadelphia.*

Hovey's Seedling and other Strawberries.—Enclosed please find subscription to your Magazine, which always finds a hearty welcome. Although our seasons are not exactly like your own, we find your advice, especially in fruit culture, very similar to our experience. With us the season has latterly been very dry; and our late fruits, peaches and pears, will be small, and perhaps ripen prematurely, but our strawberry crop was very fine, indeed, some specimens measuring 5¼ inches. And we find our opinions fully confirmed by this year's experience, *nothing like Hovey's Seedling for a crop.* Although Burr's New Pine, McAvoy Superior, and Extra Red have produced fine specimens, yet the crop was deficient. The Early Tillotson peach with us mildews badly.—*Truly yours*, A. Updegraff, *Williamsport, August* 12, 1854.

Art. III. *Societies.*

NEW YORK STATE AGRICULTURAL.

This old Society held its Annual Fair in New York city, at Hamilton square, on the 3d, 4th, 5th and 6th of October. The location was rather too far out of the city to draw together a large company of amateur cultivators, but the exhibition was one of the best in the Horticultural department ever made. The number of contributors was not large, but the quantity very good. Messrs. Ellwanger & Barry, of Rochester, exhibited upwards of 150 varieties of pears, and Messrs. Hovey & Co., Boston, had 190 varieties, and of a large part of them a dozen specimens each. Messrs. Hovey & Co. also exhibited the Concord Grape, from Mr. E. W. Bull, which attracted great attention. Dr. Fowler, of Fishkill, displayed the finest lot of Dianas we ever saw; we were not aware that this delicious grape could be so finely produced.

The show of flowers, owing to the dry season, was not so good as expected; but Messrs. Hogg and other cultivators sent some fine plants, and Messrs. Donadi, Boll, Moré and others, superb specimens of cut roses.

The principal awards of premiums were as follows:—

Fruits. *Apples.*—Greatest number and best specimens, to J. W. Bailey, Plattsburgh, N. Y., silver cup, value $15.

Best 20 varieties, to A. Frost & Co., Rochester, $10.

Best 12 varieties, to John H. Coy, Ithaca, Tompkins Co., $5.

Pears.—Greatest number of good varieties and best specimens, to Ellwanger & Barry, Rochester, silver cup, value $15.

Best 20 varieties and best specimens, to Ellwanger & Barry, Rochester, silver plate, value $10.

Second best, to A. Frost & Co., Rochester, $5.

Best 12 varieties, to Ellwanger & Barry, Rochester, $2.

Peaches.—Best variety, 12 specimens, to John R. Woolsey, New York, $2.

Plums.—Greatest number of varieties and best grown specimens, to Ellwanger & Barry, Rochester, $2.

Grapes.—Greatest number of native varieties and best specimens, to R. T. Underhill, Croton Point, N. Y., $5.

Greatest number and best specimens of foreign grades, grown under glass, to S. W. Ludlow, Yonkers, Westchester Co., $10.

Watermelons.—Greatest number and best specimens, to John Hope, Cruger's Island, Dutchess Co., $2.

Peaches.—Greatest number and best grown specimens, to H. G. Dickenson, Lyons, N. Y., plate, value $5.

Best one variety, 12 specimens, to H. G. Dickenson, Lyons, $2.

Plums.—Greatest number of varieties and best grown specimens, to Elisha Dorr, Albany, plate, value $5.

Best six varieties, to Elisha Dorr, Albany, plate, value $2.

Best one variety, to Elisha Dorr, Albany, $2.

Grapes.—Greatest number of native varieties and best grown specimens, to Theodore Fowler, Fishkill, Dutchess Co., $5.

FOREIGN FRUIT. *Pears—out of the State.*—For the greatest number of varieties and best specimens of pears correctly named, to Hovey & Co., Boston, silver cup, $15.

For the best twenty varieties of pears, best specimens, correctly named, to Hovey & Co., Boston, silver plate, $10.

Grapes.—Best variety of good native grapes, to Hovey & Co., Boston, (Concord,) $2.

Best specimens and greatest number of varieties foreign grapes grown under glass, to James Potter, Princeton, N. J., $10.

Best one variety of "Black Hamburg," grown under glass, to James Potter, Princeton, N. J., $3.

Apples.—Best specimens and greatest varieties of apples, to L. S. Pennington, Whiteside, Ill., silver cup, value $15.

For the best twenty varieties of apples best grown and correctly named, to L. S. Pennington, Whiteside, Ill., silver cup, value $10.

BROOKLYN HORTICULTURAL.

This new and flourishing Society held its Annual Exhibition in Brooklyn on Wednesday and Thursday, the 20th and 21st of September. Though not yet twelve months established the Society made a very creditable show. In addition to the plants and flowers contributed from the vicinity of Brooklyn, Mr. Cope sent from Philadelphia leaves of his Victoria regia, and Mr. Dundas from the same city sent a collection of beautiful ferns. Messrs. Hovey & Co., Boston, sent a collection of their new Fancy Dahlias.

Mr. L. Menand of Albany had a fine collection, including some fine heaths, and Mr. J. E. Rauch contributed a fine lot of variegated leaf plants, just now so much the fashion in England.

The fruit was very fine, particularly the grapes. W. C. Langley, R. Rennie, R. M. Blackwell and others were large and finely colored. The pears were principally from Boston, Messrs. Hovey & Co. sending 30 very beautiful and superior kinds.

The premium for the best display of grapes was awarded to W. C. Langley. For the best display of pears to Hovey & Co. For the best plants in pots, to M. Collopy. For the best display of dahlias, to Hovey & Co. And for the best cut flowers, to Jos. Wier. Numerous other premiums were awarded.

PENNSYLVANIA HORTICULTURAL.

The monthly stated meeting of this society was held on Tuesday evening, Aug. 15th, in Sansom Street Hall—the President in the chair. The display was far better than usual for the month of August, especially so in greenhouse plants. A fine specimen of the Bonapartea serratifolia, from Mr. Cope's collection, was an object of much attraction; it is the first time that a plant of this species has bloomed in this country; it was full ten feet in height; its flower stem, bearing innumerable greenish flowers, was more than half that altitude.

Among Mr. Buist's handsome plants was a beautiful specimen of the Clerodendron Kæmpferii, for the first time shown; also, the Lobelia St. Clair, not before seen on the society's tables. Mr. Fahnestock's gardener did himself much credit with his profusely flowering plants of the choicest varieties. Mr. Knorr's gardener brought a collection of select kinds, all well grown. From Mr. Dundas' grounds were large and fine specimens of established kinds. A table of richly flowering balsams, asters, coxcombs, and other annuals, was shown by John Lambert's gardener. The baskets of cut flowers and bouquets were most tastefully arranged. In the fruit department were very fine grapes, shown by John Riley, gardener at the Insane Asylum; by Wm. Grassie, gardener to C. P. Fox; by A. J. Smith, gardener at Eden Hall; Alex. Burnett, gardener to H. P. McKean, and Wm. Johns. Fine peaches, plums and pears came from Isaac B. Baxter's garden. The delicious Stanwick nectarine, from Mr. Cope's, was for the first time tested before the society. Pears were exhibited by Mrs. Markau's gardener, and Geo. W. Earl.

Vegetables. A very extensive display was made by A. L. Felton.

The following were the premiums awarded:—By the Committee on Plants and Flowers—Collection of 12 plants in pots: For the best, to T. Robertson; for the second best, to Robert Buist; for the third best, to J. Kent. Specimen plant: For the best, to the same; for the second best, to J. Pollock. New plants: A premium of five dollars to Jerome Graff, for a flowering specimen of Bonapartea serratifolia; and two dollars to R. Buist, for the Clerodendron Kæmpferii. Basket: For the best, to J. Kent; for the second best, to C. Miller. Of Indigenous Flowers: For the best, to Meehan & Saunders. Bouquets, one pair: For the best, to C. Miller; for the second best, to Jerome Graff. Special premiums—One dollar to J. Pollock, for orchids, &c.; one dollar to J. Graff, for a design of cut flowers, and two dollars to J. Lambert's gardener for a collection of annuals, balsams, coxcombs, and asters.

By the Committee on Fruits—Grapes: 3 bunches of a black variety, to J. Riley, for Black Hamburg; for the second best, to W. Grassie, for the same variety. Of a white variety: For the best, to A. J. Smith, for White Syrian, and for the second best, to the same for Frontignac. Plums: For the best, the Green Gage, and for the second best, the Abricotte, to Isaac B. Baxter. Peaches: For the best, the Jane, to the same. Pears: For the best, to the same.

Special Premiums—One dollar each, to Jerome Graff, for the Stanwick nectarine; to John Riley, for the West's St. Peter's grape; to Wm. Johns, for very fine Tokay grapes, and to Mrs. Markau's gardener, for the Moyamensing pear.

The committee allude to a fine specimen of the Lawton blackberry, received from the original propagator, Wm. Lawton, of New Rochelle, N. Y., some of them weighing 86 grains without the stem.

By the Committee on Vegetables—Display: For the best, by a market gardener, to A. L. Felton.

The Committee on Finance reported that the treasurer's semi-annual statement was correct.

The Recording Secretary reported the estimated losses, sustained by the society by the fire at the Philadelphia Museum building, on the 5th July.

The Committee, to whom was referred the subject of an Autumnal Exhibition, reported a recommendation, after mature deliberation, to intermit, for this season, the usual grand exhibition, and solicit all contributors to send their horticultural products to the great State Fair, to be held at Powelton, on the 26th September, which was approved of by the society; and a committee of twelve members were ordered to be appointed to assist a similar committee from the State Agricultural Society, in conducting the horticultural department.

On motion, Ordered, that fifteen delegates be appointed to attend the session of the American Pomological Society, to meet at Boston on the 18th of September next.

Two gentlemen were elected resident members of the society.

Art. IV. *Massachusetts Horticultural Society.*

October 7.—The stated quarterly meeting of the Society was held today,—the President in the chair.

The first business being the choice of officers for 1855, the Society proceeded to ballot for the same, and the following gentlemen were elected:—

President.—Joseph S. Cabot.

Vice Presidents.—Benjamin V. French, Cheever Newhall, Edward M. Richards, Josiah Stickney.

Treasurer.—William R. Austin.

Corresponding Secretary.—Eben. Wight.
Recording Secretary.—W C. Strong.
Professor of Botany and Vegetable Physiology.—John Lewis Russell.
Professor of Entomology.—T. W. Harris.
Professor of Horticultural Chemistry.—E. N. Horsford.

STANDING COMMITTEES.

On Fruits.—E. Wight, Chairman; Joseph Breck, C. M. Hovey, W. R. Austin, F. L. Winship, W. C. Strong, A. W. Stetson.

On Flowers.—Joseph Breck, Chairman; A. McLennan, E. A. Story, Thomas Page, Azell Bowditch, G. Evers, F. Burr.

On Vegetables.—H. Bradlee, Chairman; D. T. Curtis, A. C. Bowditch, Peter Lawson, J. B. Moore.

On Library.—C. M. Hovey, Chairman; Azell Bowditch, W. S. King, Samuel Kneeland, Jr.; R. M'Cleary Copeland, Librarian.

On Synonyms of Fruit.—M. P. Wilder, Chairman; P. B. Hovey, B. V. French, S. Walker, Eben. Wight.

Executive Committee.—J. S. Cabot, Chairman; W. R. Austin, M. P. Wilder, S. Walker, P. B. Hovey.

For establishing Premiums.—E. Wight, Chairman; J. Breck, H. Bradlee, F. L. Winship, P. B. Hovey.

On Finance.—M. P. Wilder, Chairman; J. Stickney, O. Johnson.

Of Publications.—E. Wight, Chairman; J. Stickney, Joseph Breck, H. Bradlee, C. M. Hovey, W. C. Strong, F. L. Winship.

On Gardens.—Samuel Walker, Chairman; W. R. Austin, F. L. Winship, T. Page. E. Wight, J. Breck, H. Bradlee, *ex officio members.*

The thanks of the Society were presented to F. L. Winship, Chairman of the Committee of Arrangements, and to each of the members of the Committee, for the satisfactory manner in which they had discharged their duty.

On motion of W. C. Strong, a committee of three was appointed to consider the expediency of employing competent individuals to deliver a course of lectures before the Society. Messrs. Walker, Stickney and Strong were appointed the Committee.

E. S. Rand, Esq., Chairman of the Special Committee appointed in July last to investigate the Report of the Select Committee and the doings of the Fruit Committee for 1853, with the award of premiums to Messrs. Hovey & Co., spoke at some length upon the subject, and the great injury which had resulted to the Society from the course which had been pursued. The Committee had not yet done anything in relation to the matter, and he would, therefore, on his own responsibility, as a member of the Society, to prevent any further agitation of the subject, make the following motion, viz.: That the Vote of Censure upon Mr. C. M. Hovey, adopted at the meeting in May last, be RESCINDED.

On motion of Mr. Rand it was then voted that the Special Committee be discharged from the further consideration of the subject, and a new Committee appointed to draw up a vote agreeably to the recommendation of

Mr. Rand. Messrs. Rand, Stickney and Sleeper were appointed the Committee.

Mr. Rand read a draft of a By-law which he had drawn up to prevent any future cause of trouble in relation to the awards of premiums. And this was referred to the Committee having the revision of the By-laws under consideration. The President and E. S. Rand were added to that Committee.

Mr. Jos. Breck, who had been reëlected Chairman of the Flower Committee, declined to serve another year, and Mr. F. Burr was chosen in his place. Mr. J. F. C. Hyde was then added to the Committee to fill the vacancy.

Wm. Todd, Roxbury, was elected a member.

Adjourned two weeks, to October 21.

Exhibited.—Fruit: Only a small display of fruit was made to-day. W. C. Strong had very fine grapes, and Stephen Driver, Salem, superior Beurré Bosc pears.

Mr. Jas. Swan sent a sample of a grape—evidently a new variety, and probably an accidental seedling—which the Committee pronounced "extra large, fine flavored, and very juicy." Mr. Shepard, of Dorchester, also sent seedling pears, which the Committee state were "large, fine appearance and flavor, slightly gritty."

October 14. *Exhibited.*—Fruit: J. Breck & Son made a fine show of grapes in variety, and a few excellent pears were shown by other contributors.

October 21.—An adjourned meeting of the Society was held to-day,—the President in the chair.

Mr. Walker, from the Committee appointed for that purpose, reported that it was expedient to have a course of lectures by competent persons before the Society—and the report was accepted, and the same Committee were authorized to procure lecturers, &c.

Mr. R. M. Copeland, of Lexington, moved that the Report made by him, as Chairman of a Committee on Scraping Trees, be taken from the table and discussed, two weeks from to-day. Adopted.

Mr. C. M. Hovey alluded to the doings of the meeting, October 7, when he was absent in New York, and suggested that the records be so amended as to correspond with the report of what had been done, and they were properly amended.

E. S. Rand, Esq. then submitted the following preamble and resolutions:—

Whereas the Massachusetts Horticultural Society, at a meeting held on the 27th day of May last, adopted the Report of a Committee appointed to examine into all the circumstances attending the award of certain premiums or gratuities to Messrs. Hovey & Co., which Report, made by the said Committee in the discharge, as they deemed it, of the duty imposed upon and adopted by the Society, charged a member of the Fruit Committee with irregular and improper conduct in procuring for himself such award, and formally censured him therefor:

And whereas the said Report is also considered as indirectly censuring all the members of the said Fruit Committee:

And whereas the Messrs. Hovey, as well as all the members of the said Fruit Committee, deny that their conduct has been in any respect irregular or improper, or in any manner contrary to the usages of the Society:

And whereas the Society is desirous of avoiding even the appearance of injustice to any of its members, and it is believed that if any irregularity did occur, the recurrence thereof will be prevented by the action of the Society in the present case, and by the enacting of suitable By-Laws. Therefore,

Resolved, That the Resolutions hereinbefore named, passed on the 27th day of May last, be and the same are hereby RESCINDED.

Resolved, That the foregoing Preamble and Resolution be entered at length on the Records of the Society.

Unanimously adopted.

Mr. Rand then moved that the words, "Rescinded October 21, 1854," be written on the margin of the record, against the Report of the Select Committee, and the vote of censure. This was UNANIMOUSLY ADOPTED.

The meeting was one of the largest ever convened in the Society's room.

Adjourned two weeks, to November 4.

HORTICULTURAL OPERATIONS

FOR NOVEMBER.

FRUIT DEPARTMENT.

ANOTHER month of rather unusual drought has succeeded September. The ground consequently has become dry and hard, and unfavorable for transplanting; a heavy fall of rain is necessary, not only to soften the ground in stiff soils, but to put it in condition for the successful removal of trees. October has, however, been a good month for trenching and preparing ground; and if advantage has been taken of the fine weather, everything will be ready for active work the present month, and much more can be accomplished than if left till the favorable time arrives. November is the month to prepare for the winter, and where there is a great deal to do, it should be commenced at once, before frost and snows and chilling rains make the work doubly laborious and uncomfortable, to say nothing of the better condition in which trees and plants winter when protected early. Immediately after the first hard frosts, raspberries and strawberries may be covered.

GRAPE VINES in the forcing-houses should now be thoroughly cleaned and washed to destroy all insects, and then tied up loosely to the trellis. Cover the border with six inches of good fresh warm manure from the stable, if convenient, and, on top of this, a good covering of leaves, old hay, straw, or seaweed. Nothing is more important than a warm border for early forcing; commence with a moderate temperature and gradually increase it as the weather becomes cooler. Vines in the greenhouse may be pruned as soon as the leaves fall. Vines in cold houses should have their wood well ripened; air freely in good weather, and use every exertion to accomplish this object. Vines in the open air may be pruned now; it is the best time to do it.

STRAWBERRY BEDS should be kept clear of weeds if the weather continues good: protect with leaves, manure, seaweed, or tan, as soon as the ground begins to freeze.

CURRANTS, RASPBERRIES and BLACKBERRIES may be transplanted now. Protect raspberries by covering with earth or coarse manure.

FRUIT TREES, of all kinds, may be set out now. Protect all newly planted ones with a barrow of good manure, and if older trees have the same quantity it will greatly benefit them.

SCIONS for grafting may be cut now, and preserved in earth in a cool cellar.

CANKER WORM GRUBS should be looked after: they begin to run up the trees this month: protect by tarring the trees, unless some of the *patent* systems are thought better.

FLOWER DEPARTMENT.

With the plants all housed, or protected in frames out of danger of frosts, the labors of the gardener should now be directed to their winter arrangement; too often this is neglected, and, for a month or two, everything is confusion and disorder. There is, however, no need of this delay, and a little care and attention now will add greatly to the enjoyment of a good collection. With chrysanthemums in abundance, a fine show of flowers may be kept up until the camellias and other plants begin to bloom.

Now is the time to place in reserve a good stock of the proper soils, composts and manures, that will be wanted before the frost is out of the ground in the spring. Secure these in dry weather, when they are in much better condition than when saturated with moisture and chilled by freezing.

CAMELLIAS will soon begin to bloom; embrace every leisure opportunity to clean the foliage, which will add much to the beauty and vigor of the plants.

CHRYSANTHEMUMS should be liberally watered, occasionally using liquid manure.

CACTUSES should be sparingly watered now, except C. truncatum, which will be coming into bloom.

ALSTROMÆRIAS should be repotted now.

CALLAS should be repotted.

ROSES, in small pots, should be shifted into larger ones.

PELARGONIUMS will now require some attention; repot all that require it, and keep in a cool airy place; fumigate often to destroy the green fly.

HEATHS will be growing freely now, and should be kept as cool as possible without frost. Repot such as really need it.

Pansies, for winter blooming, may be potted now.

Monthly Carnations will bloom all winter if the plants are strong and well established. Keep the flowering stems tied up neatly to stakes.

Nemophilas, Schizanthus, &c., should be shifted into larger pots as soon as they have filled the soil with roots.

Cinerarias should be shifted into larger pots.

Spiræa prunifolia, Weigelia rosea, &c., may be potted for forcing into bloom in the greenhouse.

Begonias, going out of flower, should be kept rather dry.

Pansy seeds may be planted now for blooming early in spring.

Stephanotus, now done growing, should be kept in a cool house during the winter.

Dielytra spectabilis. Strong plants of this beautiful flower, if taken up and potted, will bloom finely in the greenhouse in spring.

Look after Insects. Clean all plants thoroughly, and spare no pains to prevent their increase: whale oil soap is the best remedy; wash and syringe the plants with it from time to time.

FLOWER GARDEN AND SHRUBBERY.

This department will yet require attention. As the leaves fall from the trees and shrubs they should be raked up, especially if near the house, and the walks should be kept clean and occasionally rolled; a little neglect now will cause a great deal of labor in the spring. All shrubberies should have a good sprinkling of old manure over the surface, which will serve both to protect from frost, and enrich the ground. Any vacancies should be filled, and, where too crowded, the branches should be cut away.

Tulips, Hyacinths, Crocuses, and other bulbs, should be planted this month.

Japan Lilies should now be taken up, divided, and reset.

White, Tiger, and other lilies, may be set out now.

Carnations, planted out in frames last month, may have a slight protection as soon as the ground freezes. A light covering of leaves will make them winter much better.

Pæonies may now be transplanted; it is the best time to do this.

Hollyhocks may now be removed from the seed beds to where they are to bloom.

Pansies, in beds, should be protected with a frame.

Roses may be safely removed now; perpetuals, though hardy, will flower much better if they are laid down and covered with a little manure or tan.

Herbaceous plants, of all kinds, may be transplanted.

Dahlias, if not taken up, should be attended to immediately.

Næapolitan Violets, in frames, should be well banked up with good manure to prevent any frost from chilling the earth around the beds.

Shrubs not perfectly hardy should be covered with straw or evergreen boughs.

Cover and protect all plants that require it before hard frosts set in.

THE MAGAZINE

OF

HORTICULTURE.

DECEMBER, 1854.

ORIGINAL COMMUNICATIONS.

Art. I. *A Social Chat with our Readers.*

An acquaintance with all the principal pomologists and cultivators of the country, for twenty years, during which long period they have been the readers of our Magazine, emboldens us to invite them to a more social chat than is usual in our monthly gossip, as we close our Twentieth volume,—an age no purely horticultural periodical, we believe, ever yet attained in Europe or this country.

When the Magazine of Horticulture was commenced, in 1835, there was no publication of the kind in the United States; and there were only three or four agricultural papers of any note. Previous to that period the old *New England Farmer* was the only journal which devoted much attention to horticultural science. Among its many correspondents were several eminent amateur cultivators, including the Hon. John Lowell, Gen. H. A. S. Dearborn, Robert Manning, John Prince, Judge Buel, and others, who communicated much valuable information on the cultivation of fruits and plants, and, by their writings, excited an unusual interest in the subject, which previously had received but little attention. To that old periodical and *Loudon's Magazine*, then in its prime, and extensively read by our leading amateurs and practical men, must be accorded the praise of having done more than all other causes towards rapidly disseminating a love for Gardening pursuits and Rural art throughout New England, and, to a certain extent, throughout the country.

It was just at the period when public attention was strongly directed to Horticultural improvement, and when our Agricultural periodicals were unable to supply the information everywhere sought for, that our Magazine was projected and commenced. It was an untried experiment, but it was one which, we believed, after having long experienced the want of such a work, must be successful. Fearlessly we issued our first number, with but a handful of subscribers, relying upon the zeal of our amateur cultivators for that aid which we well knew they could give, and which we had every reason to hope we should receive. The twenty volumes of our Magazine, complete with this number, show that we had not mistaken the public mind; and we now say it, because it is familiar to all our older readers—and it is our custom to speak plainly—that though our early support was liberal, we were opposed and thwarted in directions which we had the least reason to anticipate; and though it might be supposed twenty years would suffice to bury every jealous feeling, if any such existed, the acts which have been recently rehearsed and recorded in our pages, show that the same opposition has not ceased its ill-advised course. But we shall not dwell on these unpleasant details. There are bright spots enough—dear, delightful remembrances—in our twenty years' labors, to obliterate all traces of such petty acts, from whatever source they may have emanated.

It is with pride as well as pleasure that we record the early and long-continued friendship of gentlemen so thoroughly imbued with a love of gardening pursuits as the late Hon. John Lowell, Gen. H. A. S. Dearborn, Robert Manning, A. J. Downing, Judge Buel, J. E. Teschemacher, Wm. Oakes, and Capt. Lovett,—through whose kindness we have been enabled to please and instruct our readers, and enrich the earlier volumes of the Magazine with some of the most valuable communications: nor should we omit, in connection with them, to record our indebtedness to a host of amateur and practical men, whose names are as familiar as the Magazine itself, and whose efforts—still continued in many instances—have shown their devotedness to the science of Horticulture, and the zeal with which they have participated in the progress and advancement of Rural taste. The kindness of the former is embalmed in our memory; and the friendship of the latter is cherished with the liveliest emotion.

Twenty years in the history of horticulture in this country carries us back to a period when our collections of fruits and plants were so limited, that we are surprised at the advancement which has been made in seemingly so short a period. Messrs. Manning, Kenrick, and Dearborn had then just opened their correspondence with Van Mons, for the acquisition of his new and choice seedling pears, which for some years had attracted great attention from the pomologists of Europe, but had not yet been introduced here. Our American varieties of the same fruit were then so few in number that the smallest garden would contain them all. Not an American seedling strawberry had then been brought before the public, and but three or four cherries. To look over the catalogues of these fruits now, and see what extensive additions have been made to them by the accessions of foreign varieties and native seedlings, must astonish even those who have been tolerably close observers of the annual progress of horticultural art. Yet all this advancement—the aggregate of which is so immense—has been monthly and yearly recorded in our Magazine, whose pages, we believe, are the only full and complete transcript of all that has been accomplished in this most interesting period in the progress of horticultural science in America.

But it is not necessary that we should be thus particular to impress upon the minds of our cultivators what has been apparent to most, if not all, of them; at least, to all who have been conversant with our gardening journals. The question we would more particularly note is, what has been the sum of good accomplished by our labors? for it is by this test that we would have them judged. Such rapid strides in any art must be attributed to influences from some source, and in the inquiry from whence, we may naturally suggest that our Magazine has not been one of the least effective.

Our Horticultural Societies have done much to aid in this great improvement, and may claim a prominent place in assisting to foster and encourage a taste for horticultural pursuits; by their exhibitions creating a generous emulation among cultivators, and, by liberal premiums, stimulating to renewed exertion the zeal of their members. Still, they have not done all. Pomological science holds a high rank in the neighborhood of Boston; the late Mr. Downing even went so far as to say we were fifty years in advance of New York. Though we by no means admit any such thing as this, there is no doubt of its advancement over our neighboring cities. Yet New York has her horticultural society, and Philadelphia has hers, both of them longer established than that of Massachusetts. In the neighborhood of Philadelphia, Mr. Cox, the author of the first and most valuable American treatise on fruits, had, thirty-five years ago, a larger collection than any other individual in this country; yet, notwithstanding this, we find no such superiority now; but, on the contrary, until within five or six years, very little change in the collections in that neighborhood. Mr. Kenrick's *American Orchardist* was the next work of any note. Much of it was the results of his own labors, but for a greater part he was indebted to the kind aid of such amateurs as John Lowell, Gen. Dearborn, R. Manning, and others. The whole number of pears exhibited at the annual show of the Massachusetts Horticultural Society in 1834, did not exceed FIFTY kinds, and of these, Mr. Manning exhibited *forty*. Compare this with the exhibitions of the last few years, and note the vast difference. In 1845, appeared the next considerable work on fruits, by Mr. Downing: in point of extent, neither of the previous works could be named with it. He had gathered from our Magazine, which had stored up all that was worth keeping for the previous ten years, and was thus enabled to publish a work creditable to himself and to our horticultural literature. Where else could such a mass of information have been available? The patient labors of Mr. Manning in pomological science, for a quarter of a century, were recorded in our columns; and the annual contributions of a band of cultivators had enriched our pages with descriptive and historical accounts of every fruit introduced from abroad or raised at home, up to that time. That our Magazine has had the credit of having exerted its energies in getting up a *pear mania* has, we know, been current; it may be we have overestimated this truly noble and magnificent fruit; we have, however, this satisfaction, that while we have labored so diligently to make the public acquainted with all its varieties, their cultivation, and management, we have not neglected other fruits. Were a candid opinion to be given by the mass of cultivators at this time, we think we should not be accused of having done too much for the pear.

That some accurate idea may be formed of the fruits which have been first described or prominently introduced to the public through our Magazine, we name the following:—

PEARS.—Adams, Bonne des Zees, Beurré Langelier, Beurré Superfin, Beurré Robin, Beurré Kossuth, Beurré Bachelier, Beurré Giffart, Belle Julie, Beurré Sterckman, Cross, Columbia, Coter, Collins, Doyenné du Comice, Doyenné d'Ete, Doyenné Boussock, Manning's Elizabeth, Frederica Bremer, Grand Soleil, Hull, Howell, Jersey Gratioli, Lawrence, La Juive, Merriam, Nouveau Poiteau, Poire d'Albret, Ropes, Supreme de Quimper, Swan's Orange, Sheldon, Sterling, St. Dorothee, Triumph de Jodoigne, Tea, Vessouziere, Walker, Henkel, &c.

APPLES.—Primate, Early Joe, Marston's Red Winter, Melon, St. Lawrence, Mother, Sutton Beauty, Mexico, Cogswell, Tufts, Bailey Spice, Ledge Sweet, Manomet, Beefsteak, Holmes, Hawley, &c.

STRAWBERRIES.—Hovey's Seedling, Boston Pine, Scott's Seedling, &c.

GRAPES.—Diana, Concord, Hartford Prolific.

CHERRIES.—New Black Bigarreau, Black Bigarreau of Savoy, Hovey, &c.

Of many of these, no description can be found except in our pages. Here is only a brief list of the more important; but from this some estimate can be formed of our exertions to make known everything worth knowing. The best evidence we can claim of the good we have accomplished is, that every eminent horticulturist in the country has been, from the commencement, a reader, or at least a subscriber, of our Magazine.

It is from such facts that we form our own estimate of the value of twenty years' service in behalf of Horticultural science. The late Mr. Downing, though one of our most energetic correspondents for ten years, afterwards spoke of us as the "Editor of a Magazine with a few hundred subscribers." It was a remark which, without doubt, he hastily made; but if we have done so much with a few hundred subscribers, that in itself is an ample reward. Through a goodly host of zealous friends, we may have achieved more than through thousands of indifferent supporters. Mr. Downing himself has remarked that "it is not the magnitude of things that is the measure of their excellence or power." It is not for us to select our readers; those who do not choose to welcome us, however, have no cause to complain, or set up the cry of "ultraism," so common in some quarters.

We have left ourselves but little room to discuss other subjects, or follow up the development of Floricultural art, Landscape gardening, and Rural taste. Suffice it to say, that they have been no less signal than those of scientific culture and pomological knowledge. Everywhere throughout the country improvement is manifest. Structures for the growth of exotic and tender plants, and gardens for the display of the choicest flowers, are becoming more general. The vicinity of all our large cities is dotted over with beautiful villas and elegant grounds; and the homes of our rural population are more and more significant of comfort and increasing taste. Everything is encouraging of progress. Gardening—both as a practical art and an art of taste—is moving forward with a rapid pace in every direction throughout our land. With a climate and soil scarcely surpassed by any temperate region, and with accumulating wealth and knowledge, there is no obstacle in the way of the greatest enjoyment of all the blessings which a bountiful Providence has placed within our reach.

Art. II. *Sounds from Inanimate Nature.*

By Wilson Flagg.

In every scene and situation nature has established certain sounds which are indicative of its character. The sounds we hear in the hollow dells among the mountains are unlike those of the open plains; and the echoes of the seashore repeat sounds that are never reverberated among the inland valleys. There are many species of singing birds within the solitudes of a forest, which are seldom heard or seen in our orchards or gardens. In the mind of one who has been early accustomed to the wildwoods, the warbling of these solitary birds is pleasantly connected with their stillness and their grandeur. Besides the singing of birds and the chirping of insects, there are voices from inanimate nature, which are full of pleasing suggestions. The murmuring of winds and the rustling of foliage, the gurgling of streams and the bubbling of fountains, come to our ears like the music of our early days, accompanied by many agreeable fancies. A stream rolling over a rough declivity, a fountain bubbling up from a subterranean hollow, produce sounds suggestive of fragrant summer arbors, of cool retreats, and all their delightful accompaniments.

The roar of a waterfall, when constantly near us, is disagreeable; but the purling of a rill, if not music, is something very nearly allied to it. The most agreeable expression of the noise of waters is their animation. They give life to the scenes around us, like the voices of birds and insects. In winter, especially, they make an agreeable interruption of the stillness; remind us that, and during the slumber of all visible things, some hidden powers are still guiding the operations of nature. The rapids produced by a small stream flowing over a gentle declivity of rocks yield, perhaps, the most expressive sound of waters, unless we except the distant roar of waves, as they are dashed upon the shore of the sea. The last, being intermittent, is preferable to the roar of a waterfall, which is tiresomely incessant. Nearly all the sounds made by water are agreeable, and cannot be multiplied without increasing the delightful influences of the place and the season.

Besides the pleasant sounds that come from water, in all its variety of shapes and movements, we must not omit to mention those which are produced by winds, as they pass through the branches and foliage of trees and shrubbery. The colors of their leaves, and the glittering light from their more or less refractive surfaces, do not differ more than the modifications of sound produced from them by the passing breezes. Every tree may be said, when agitated by the winds, to have a voice peculiar to itself, and capable of exciting the most agreeable sensations. The lofty branches of pines, when swayed by the wind, emit a sound like the murmuring of distant waters, and inspire a soothing melancholy like that inspired by the continual twilight that reigns within their solitudes. The leaves of the poplar, proverbial for their tremulous motion, produce a more cheerful sound, corresponding with the gaiety of summer, and harmonizing with the more lively scenes around them. Every tree and shrub is a delicate musical instrument, whose notes remind us of the character of their foliage, and of the season of the year,—from the mellow harmony of the willow trees in summer, to the sharp rustling of the dry oak leaf that tells us of the arrival of winter.

Each season of the year has its peculiar melodies, besides those proceeding from the animated creation. In the opening of the year, when the leaves are tender and pliable, there is a mellowness in the sound of the breezes, as if they felt the voluptuous influence of spring. Nature then softens all the sounds from inanimate things, as if to avoid making any harsh discords with the anthem that issues from the streams and woodlands, vocal with the songs of millions of happy creatures. The echoes also repeat less distinctly the multitudinous notes of birds, insects, and other creeping things. With them, spring and summer are seasons of comparative rest, save with those which reside among the rocks of the desert, or among the dells of the craggy seashore. Here, sitting invisibly in their retreats, are they ever responding to those sorrowful sounds that are borne upon the waves as they sullenly recount the perils and accidents of the great deep.

After the severe frosts of autumn, the winds become shriller, as they pass over the naked reeds and rushes, and through the leafless branches of the trees, and there is a familiar sadness in their murmurs, as they whirl among the dry rustling leaves. When winter has arrived and enshrouded all the landscape in a winding sheet of snow, the echoes once more venture out upon the open plain, and repeat, with unusual distinctness, the miscellaneous sounds from wood, village and farm. During winter they enjoy a long holiday of freedom, and show no sympathy with the desolate appearance of nature. They hold a laughing revelry in the haunts of the Dryad,* who sits sad and disconsolate in her now unsheltered retreats, where the leafless boughs scarcely protect her from the shivering wind, or shade her from the cold icy beams of the moon.

At this time our ears are greeted by the sound of the woodman's axe, that comes with multiplied reverberations through the solitude of the forest. Though one of the most cheerful of all sounds, so far as it reminds us of the presence of human beings in these solitary places, yet it is sadly suggestive of the fall of venerable woods and of those changes in the face of nature which we cannot witness without regret. With a more unmixed cheerfulness do we listen to the hammering of the woodpecker upon some hollow tree in the wood, and to the creaking of the dry branches which are partly severed from the trunk of the tree, as they swing to and fro in the wind.

But when the sun gains a few more degrees in his meridian height, and the snow begins to disappear under the fervor of his beams, then do the sounds from the dropping eaves, and the clash of falling icicles from the boughs of the orchard trees, afford a pleasant sensation of the grateful change which has already commenced; and the utterance of these vernal promises suddenly awakens all the delightful anticipation of birds and flowers. The moaning of the winds has been plainly softened by the changes of the season, and the summer zephyrs that occasionally pay us a short visit from the south, and signalize their coming by the crimsoned dews at sunrise, let loose a thousand rills that make a lively babbling music, as they leap down the hillside into the valleys. Yet of all these sounds from inanimate nature, there is not one but is hallowed by some glad or tender sentiment of which it is suggestive; and we have but to yield our hearts to their influences to feel that for the ear as well as for the eye, nature has provided an endless store of pleasures.

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* The Dryad, in modern mythology, is the fanciful impersonation of all animal life in the woods.

I believe that the majority of agreeable sounds from the inanimate world owe their charm to their power of gently exciting the emotion of melancholy. Our minds are constructed with such a benevolent regard to our happiness, that all the feelings of the heart, including even those of a painful sort, are capable, under certain states or degrees of excitement, of becoming a source of agreeable sensations. Such is the memory of past pleasures, that brings with it a species of melancholy which is a luxury to all persons of refined sensibility. The murmur of gentle gales among the trembling aspen leaves, or the noise of the hurricane upon the seashore, the roar of distant waters, the sighing of the wind as it flits by our windows or moans through the casement, have the power of exciting just enough of this sentiment to produce an agreeable state of the mind. Along with the melancholy they excite, there is something that tranquilizes the soul and exalts it above the mere pleasures of sense.

It is this power of producing the sentiment of melancholy that causes the sound of rain to yield pleasure to the majority of minds. The pattering of rain upon the windows, but more particularly on the roof of a house under which we are sitting, is attended with a singular charm. The more violent the rain, if its violence be not sufficient to cause alarm, the more profound is the emotion that springs from it. There are few persons who do not recollect, with a most agreeable sense of past delight, some adventure of a shower that obliged them, on a journey, to take shelter under a rustic roof by the wayside. The pleasure produced by the sight and sound of the rain, under this retreat, often comes more delightfully to our remembrance than all the sunshiny adventures of the day. But in order to be affected in the most agreeable manner by the sound of rain, it is necessary to be in the company of those whom we love, and to know at the same time that the objects of our care are within doors, and to be ignorant of any one's exposure to its violence. From this consciousness of security comes perhaps half the pleasure awakened by the sound of rain; but this I am confident would not account for the whole effect.

The question has often been argued, why we delight in witnessing from a place of security, a ship buffeting the waves in a storm. This pleasure can arise only from the excitement of hoping for the final deliverance of the vessel and her crew, and of watching the progress of the sufferers while they are striving to reach the harbor. It does not arise from contrasting our own safety with the dangers to which they are exposed. On the contrary, should we behold a certain prospect of their destruction, we should no longer take any pleasure in the sight. But the view of a storm is pleasing, when we are ourselves, and believe others to be, in a place of safety. Then do we listen with intense delight to the voice of winds and waters as they contend with the Demon of the storm, and the awful warring of the elements excites the most sublime sensations, unalloyed with any painful anxiety for the safety of a fellow being.

During a thunder-storm, the thunder is in most cases too terrific to allow one to feel a tranquil enjoyment of the occasion. Perhaps there is no sound in the world which is so pleasantly modified by distance. Some minutes before the commencement of a thunder-storm, there is a perfect stillness of the atmosphere which is fearfully ominous of the approaching tempest. It follows the first enshrouding of daylight in the clouds which are gathering slowly over our heads, as they come up from the western horizon. It is at such a time that the sullen moan of the thunder, far down, as it were, below the belt of the hemisphere, is peculiarly solemn and impressive, and more productive of the emotion of sublimity than when its crash is heard directly over our heads.

Thunder is evidently heard with different emotions, when it proceeds from the clouds which are rising towards us, and when it proceeds from those which have already settled down in the east, after the storm has passed away. The consciousness that the one indicates a rising storm renders it strongly suggestive of the perils we are soon to encounter, and adds intensity to the feelings with which we contemplate it. When we are in the midst of a violent thunder-storm, we feel the emotion of fear rather than that of sublimity. An uncomfortable amount of anxiety destroys that tranquillity of mind which is necessary for the full enjoyment of the sublime as well as the beautiful scenes of nature.

But it is pleasant after the terrors of the storm have ceased, when the blue sky in the west begins to peer in dim streaks, through the misty and luminous atmosphere, to watch the lightnings from the window, as they play down the dark clouds in the eastern horizon, and to listen to the rumblings of the thunder as it commences loudly over our head, and dies away almost like the roaring of waves in a distant part of the heavens. Then do we contemplate the spectacle with a grateful feeling of relief from the fears that lately agitated the mind, and surrender our souls to all the influences naturally awakened by a mingled scene of beauty and grandeur.

The emotion of sublimity is more powerfully excited by any circumstance that adds mystery to the scene, or the sounds we may be contemplating. For this reason any sound which resembles that of an earthquake impresses the mind at once with a feeling of awe, however insignificant its origin. The wailing of winds through the crevices of the doors and windows owes its effect, in a great measure, to this principle of mystery, and, especially to the young or the superstitious, often becomes a source of sublimity. Hence the power of the dusky shapes of twilight to produce terrors, and hence the booming of a cannon over a distance that renders its identity uncertain, and prolongs the sound by hollow reverberations, causes in the hearers a breathless attention, as to something ominous of danger. We may thus explain why all sounds are so suggestive in the stillness of the night: the rustling of a zephyr as it glides half noiselessly through the foliage of the trees; a few scarce but heavy drops of rain from a passing cloud, that give the signal of an approaching shower; the footfall of a solitary passenger in the street; the tinkling of a cow-bell, heard occasionally as the creature changes her position under a tree in a neighboring field;—all these sounds are dependent on the stillness and darkness of the night for their peculiar influence on the mind.

It is evident that the charm of all these sounds proceeds from the imagination. A person who has not cultivated this faculty is dead to a thousand pleasures from this source, that form a considerable portion of the happiness of the man of superior intellect. Music has no advantage over other sounds, except in its greater power to act upon the imagination. To appreciate the charm of musical sounds, or to perceive the beauty of an elegant building or splendid tapestry, requires but little mental culture. But to be susceptible of pleasure from what are commonly regarded as indifferent sounds, or indifferent sights, is the meed of those who have cherished the higher faculties and the better feelings of their nature. To such persons the world is full of suggestive sounds as well as of suggestive sights, and not the whisper of a breeze or the murmur of a wave but is in unison with some chord in their memory or their imagination.

Beverly, November, 1854.

ART. III. *Can our Native Grapes be improved by Cultivation?* By S. HALE, Keene, N. H.

MR. EDITOR,—Just now, I accidentally took up Emerson's *Trees of Massachusetts*, which is to me delightful reading, and, after turning over many leaves, sought the chapter on Grapes; there my attention was arrested by the remark that, "from the seeds of grapes of this kind (the Fox grape) have been produced the Isabella, the Catawba, Bland's grape, the Schuylkill, the Elsinburgh, and others. *It promises much from the effects of cultivation.*"

Permit me to ask, what justifies Mr. Emerson in relying on this promise? Was it ever known that a sour grape was made a sweet one by cultivation? Was an austere Fox grape ever made less austere by that means? By cultivation, I suppose he means, removing a vine from the woods or hedge to the garden, giving it a favorable exposure, trimming it artistically, furnishing it with a trellis, and supplying it with sufficient and appropriate nourishment.

All this may have a slight effect on the individual vine so removed and so treated; it may make the fruit and the clusters larger; it may possibly make the pulp more juicy, and enlarge the proportion of the pulp to the skin; but it may be doubted whether its effect would extend further; and also whether a cutting from this vine, or the vine itself, if retransferred to the woods or hedge, would not lose all the excellence which cultivation had imparted to it.

The theory seems to be a good one, that when a vegetable springs from a seed, its organs are endowed with certain faculties and propensities which enable and cause it to select and imbibe from the earth and the air, by the roots and the leaves, certain salts and gases, in certain proportions, and furthermore so to elaborate them as to produce certain qualities in the fruit. This endowment or peculiarity of functional action is imparted by nature, and cannot be changed.

If asked, how does nature act, by what laws is she governed in imparting this peculiarity, I ask to be excused from answering, and will only express the opinion that it is imparted between the incipient formation of the blossom and the ripening of the seed. From a seed thus formed,—fortuitously, as some would say; by the necessary operation of natural laws, as others would say,—has sprung all the varieties of grapes, and of course of apples and peaches, that ever existed. It is a very natural, certainly not an absurd, supposition that the parent seed of the Chasselas was formed and ripened, and first vegetated, in Persia or Palestine, 2000 years ago; that it was first discovered in a forest or hedge, and then tasted precisely as it now tastes; and that it has been propagated by cuttings from that day to this.

My purpose in writing is to advise horticulturists and all lovers of grapes to relinquish the hope of improving them, to any extent, by cultivation; and to urge them to endeavor to produce hybrid varieties, and also to seek such excellent varieties as nature forms, in the same way, in the vast field of her operations. Let no one pass near a wild grape vine, north of latitude forty, when its fruit is ripe, without examining and tasting it; and if he finds it large, abundant on the vine, and pleasant to the taste, let him stick down a stake and secure it for the benefit of the public.

Mr. Emerson, in speaking of the Summer White grape, says—"It ripens in the last of July, and in August and September; I have gathered some of this variety in the woods decidedly superior to the Isabella grape." Why did not the man stick down a stake, or mark the nearest tree, and blaze a road to it, as bee-hunters do to a swarm of bees discovered in a tree? It would have been, or should have been, called the Emerson grape; every farmer's dwelling in New England, lower than the base of the White Mountains, would, in fifty years, have been decorated with it; and future generations, as remote as we are from Darius, would have blessed him.

Neither let any man pass a shell-bark or a hazel without observing and tasting, and if he finds the fruit of either remarkable for any excellence, I pray him to take note of it, and secure it for the benefit of his fellow-men. Walnuts vary in taste as well as size, though the range is by no means so wide as in grapes and apples.

When I begun, Mr. Editor, I thought only of grapes, but the course my pen has taken leads me to inquire of you, whether the shell-bark can be propagated by grafting on stocks of its own variety, and also on the pig nut? I have made several trials to engraft the shell-bark on the pig nut, but have failed in all. Will you inform me if it can be done successfully, and, if so, what time should be chosen, and what mode pursued; by doing which, you will, I doubt not, give valuable information to others.

Keene, N. H., Nov. 1854.

We welcome the remarks of our correspondent. They are pertinent, and worthy of consideration. We have ourselves been surprised, not only at the remark of Mr. Emerson in regard to the improvement of the Fox grape by cultivation simply, but at the remarks of other writers in regard to the improvement of other fruits—the blackberry for instance. Our correspondent has truly stated that no permanent improvement can be made only through the seed. In a review of Mr. Emerson's interesting work in a previous volume, (XIII.) the reviewer has noticed the very paragraph alluded to above, in reference to the Summer grape, and remarked that he had never seen such a fine wild variety. But presuming the old adage, *de gustibus non*, &c., applied in Mr. Emerson's case, he advised cultivators to attempt the production of new kinds from seed. We, ourselves, would give much to see a *white* grape *ripening* in July, and *superior* to the Isabella. It would be a treasure, worth to the public, practically, more than Mr. Emerson's entire volume.

We are unable to answer Mr. Hale's last paragraph in a satisfactory manner, as we have never had any experience in grafting walnuts or shell-barks. Some valuable hints will be found in our present volume, (p. 78), where an experiment is detailed in grafting a new hybrid walnut on the English walnut. The operation, however, is a difficult one, and rarely succeeds. Mr. Knight wrote an article upon grafting the walnut, in the *Horticultural Transactions*, in which he stated, that, " out of twenty-eight grafts inserted, twenty-two grew well, generally very vigorous, producing shoots nearly a yard long. The grafts were attached to the young (annual) wood of stocks, which were between five and eight feet high, and in all cases were placed to stand astride the stocks, one division being, in some, introduced between the bark and wood; and both divisions being, in others, fitted to the wood or bark in the ordinary way. Both modes were equally successful. In each of these methods of grafting it is advantageous to pare away almost all the wood of both the divisions of the grafts." Mr. Knight also "suffered the buds of both the scions and stocks to grow for a week or so in the spring; then to destroy all the young shoots and foliage, and to graft at a subsequent period." We shall be glad to hear of any successful experiment, doubting not it can be done with skilful management.—Ed.

Art. IV. *Pomological Gossip.*

The Concord Grape.—It is with some hesitation that we again notice this fine grape; but, as we are closing up the year, and the Twentieth Volume of our Magazine, we think we may at least say a few words for those of our friends who have been our constant readers during this long period, and we are vain enough to think, believe what we state in regard to this as well as other fruits. But we have little more to offer, ourselves; this grape is now well known everywhere—it has been exhibited before various influential societies the present season,—it has been sent to numerous grape cultivators in various parts of the country, who have requested specimens from us,—and in, we believe, every instance, it has fully satisfied expectations, and proved quite equal to all that we, or Mr. Bull, have ever claimed for it. The best evidence of its excellence is the attacks which have been made upon it—attacks originating from jealousy at the success of Mr. Bull in its production, and in the sale of the vines. Even the doings of the last session of the American Pomological Society were tarnished by an attempt to injure its reputation. All that has been said, however, has only increased the desire to see and taste it—for the mass of cultivators well know that a grape only "fit for jellies," as has been stated in regard to the Concord, would never require such herculean efforts to talk and write it down, as have been made with the latter grape.

As we remarked above, we now bring it to the notice of our friends to show them what other individuals think of the Concord beside ourselves. In the town where Mr. Bull resides there is a Farmers' Club, composed of all the practical men of that ancient town, renowned for its gardens and farms. A committee of this club was chosen to examine the grape and test its qualities, and the following is their report:—

"The Committee upon the Concord Grape report that they have attended to the agreeable duty assigned to them, and that in their opinion the Concord grape possesses, in a high degree, the essential properties of a perfect grape, beauty of form and color, richness of fragrance and flavor, and abundant juiciness. Its skin is thin and remarkably free from astringency. The vine is a free grower, an abundant bearer, and very hardy in its habits, and what renders it peculiarly valuable in our New England climate, is the fact that it ripens two or three weeks earlier than any other good variety with which we are acquainted. They congratulate Mr. Bull, the producer of this seedling grape, upon the success which has resulted from his patience, perseverance and skill, and they congratulate the horticulturists of the country, upon the addition of so fine a variety to our native grapes. Your committee have partaken of more than one bottle of wine made from this grape, but they assure the members of the club that they do not speak under the influence of wine when they say that they know of no other grape, in this country, so well adapted to the production of wine as the Concord grape. Signed by Jos. Reynolds, Secretary."

The Committee were Jos. Reynolds, (Proprietor of the *New England Farmer*,) W. W. Wheildon, (Editor of the *Bunker Hill Aurora*,) S. G. Wheeler, Wm. D. Brown, and Jos. P. Brown, gentlemen of the highest standing in Concord.

The next impartial evidence is from Horace Greeley of the *New York Tribune*, well known for his independence of opinion and firm adherence to truth:—

"*The Concord Grape.*—We tested at our late State Fair several specimens of the new Eastern grape, named as above, and were agreeably disappointed in it. The berries are from a fourth to a third larger than either the Isabella or Catawba; the bunches are larger and heavier; the vine (being a native of Massachusetts) is far hardier than any rival of southern origin; and the fruit ripens from three weeks to a month earlier. Those exhibited at our Fair by Hovey & Co. of Boston had ripened on the 6th of September. Such qualities should commend it to general adoption, not as a substitute for the Isabella, but as an additional resource. The naked fact of its early ripening ought alone to secure it a place in every garden.

The general verdict of those who tasted it at our Fair seemed to be that the new grape had more pulp than the Isabella, and was not quite equal in sweetness. We could not perceive the difference.

We trust the success—for such, in spite of opposition, it is—of Mr. Bull, who first called attention to the Concord grape, will induce a general search through our northern fields and forests for native grapes of decided excellence."

Here is the truth in the fewest words—"*We could not perceive the difference.*" And this is not all. Mr. Greeley, who ought not to know more of the merits of a new grape than professed pomologists, has noted especially one of the most important qualities of the Concord—and that very quality denied to it by horticulturists. He says, "Such qualities should commend it to general adoption, not as a substitute for the Isabella, but as an ADDITIONAL RESOURCE." Yet some writers have gravely stated that it would answer very well for the New England States, where the Isabella would not ripen! Truly, there is a remarkable fastidiousness in regard to the culture of the grape. If we had only the Bartlett pear under cultivation, and a new variety, *nearly equal* to it, were introduced, ripening just *one month* earlier, the pomological world would run crazy; but a new grape, admitted by everybody to be superior in size, beauty, productiveness and hardiness to the Isabella, four weeks earlier, and at least nearly equal to it by those who think the least of it, is considered as only valuable for "*Northern sections*"*!* What would be the value of a new strawberry, ripening *four weeks* before the Early Virginia? Or a new peach, maturing one month before the Early York? We wait for a reply.

Further evidence we have from a gentleman in New York state, who requested us to forward him a few specimens for trial:—

"I am sorry that the two clusters that you kindly sent me of the Concord Grape, did not keep longer. They gave the utmost satisfaction, and every good judge of fruit, *said they were decidedly better than the Isabella.*—*Yours*, J. D. INGERSOL, *Ilion, New York, October*, 1854."

We might multiply these recommendations indefinitely. We do not bring them forward now to establish the quality of this grape; but only to show in strong contrast the determined efforts of some parties to defame both Mr. Bull and his favorite grape.

A BUDGET OF ERRORS.—Not long since our friend Barry undertook to show up our errors. It is now our turn to show up his; and though it is a duty we dislike, it is necessary we should do so. He thus notices the Concord grape:—

"*The Concord Grape.*—Numerous correspondents write us that they were disappointed at not finding an expression of our opinion of this fruit, in the October number. We will give it now. It was presented, in large quantities, before the Pomological Society at Boston, and since then we have been able to examine it carefully at home, Mr. Bull having politely sent us a box of them. It is a large, handsome grape, both bunch and berry resembling the Isabella in appearance, save that the bunch is usually more compact and the berry rounder and has a thicker coat of bloom. It has the same foxy perfume and flavor of the Isabella, but stronger; when a few berries are eaten, a prickling sensation is produced on the tongue. This has been remarked by all who have tested it, as far as we know. It is very juicy, and we think will prove to be an excellent wine grape. For the table, however, we do not consider it equal in quality to the Isabella; and in this opinion nearly all disinterested parties, whom we have conversed with, agree. It was tested and compared with the Isabella, at Boston, grown at Weston, not far from Concord; and not one on the committee considered it as good. We have again compared it with Isabellas grown here, and the latter has been unanimously pronounced superior.

Yet we regard the grape as an important acquisition, as ripening earlier than either the Catawba or Isabella, and therefore likely to furnish northern sections with a grape, where heretofore no good grapes have ripened. It may be two weeks earlier than the Isabella, but not more, we think; for ripe Isabellas, *fully ripe* and *excellent*, grown within ten miles or less of Concord, were shown beside it at Boston. The location, however, must have been a very favorable one; for most people seemed surprised to see it ripe so early, and some, Mr. Hovey included, asserted very positively that they were not Isabellas but veritable Concords. Mr. Hovey adhered to this opinion, we believe, until he went out to Weston and examined the vine from which the Isabellas were gathered. From this, one would suppose that there is a great similarity between the two grapes; and so there is; but the form and flavor are both different, as we have already said, and the canes of the Concord are much more slender than those of the Isabella.

We believe the merits of this grape have been exaggerated. It has been described as being '*free from all pulp*,' and of a *very rich and luscious flavor*. Mr. Bull himself, however, described it as having 'very little pulp,' which is nearer the truth. We think it will, with the same treatment, be about the size of the Isabella. It appears to have a vigorous constitution, likely to escape mildew and other diseases to a great extent; and this is a very important quality. On the whole, we congratulate Mr. Bull on his successful attempt at raising seedling grapes; it affords him ample encouragement to continue his labors in this direction."

Here are two or three errors. In the first place we never "very positively asserted" that the Isabellas he alludes to were Concords. We did, however, positively assert, and we do now positively assert, that the Isabellas, so called, exhibited from Weston, were *not* Isabellas. In the second place we have *never* changed our opinion; and what is more, we have *never* been to Weston to see the vine from which the Isabellas were gathered. We did, however, pay the owner of it, Mr. Cutter, one dollar for a little plant to set out in our collection, which he duly brought to us.

And now, as Mr. Barry did not tell only half of the story about the Concord we will finish it. Mr. Barry was one of the Committee of the Pomological Society to examine American fruits. This committee attended to their duty, and after tasting the Concord examined the Isabellas; but although there were fine specimens grown in Boston, where they are always two weeks earlier than in the country, there were none ripe enough to eat. Fortunately for the committee, Mr. Cutter of Weston, Mass., had just that moment brought in some grapes which he called Isabellas, (this was the 14th of September,) splendid specimens, FULLY RIPE. The committee tasted them, and pronounced them better than the Concord, and quite as early, as they were as sweet as the veritable Concords of Mr. Bull. It so happened that we were absent at our residence in Cambridge at the time, but upon our visit to the Society's pavilion, we found quite an excitement, and the welcome news that the Isabella was not only better, but earlier than the Concord. These grapes we had not seen, as they were not on the table the day previous; we proceeded to examine them, and at once pronounced them NOT to be Isabellas; so certain were we that they were not that old and well known variety, that we invited Mr. J. F. Allen of Salem to examine them, and give us his opinion. He at once concurred with us, and further stated that if they were Isabellas "he did not know what an Isabella was." It is needless to say that Mr. Allen's judgment about grapes will not be called in question. But, to confirm his opinion, he offered to send the next day a bunch of his Isabellas, grown in his cold grapery. They were duly received, and the Chairman of the Fruit Committee invited gentlemen to examine the Weston Isabellas, Mr. Allen's Isabellas, and the Concords together. But, sorry as we are to state it, not one of the persons present, including Mr. Barry, ventured to express an opinion, so fearful that they might say something that would derange the tactics of the opposition. And thus, after all Mr. Allen's pains to enlighten the pomologists present, in regard to the identity of the Isabellas from Weston, no information was elicited. Why could not Mr. Barry have expressed an opinion, able as he was to give it, with the grapes before him, and not wait until his return home to tell what "we think," and what "we believe," and finally, "on the whole, to congratulate Mr. Bull on his successful attempt at raising seedling grapes," *not equal* to the Isabella! This is what we should term "progressing backwards." This is the whole story. It is hard work to sit on *two* stools.

The Wilkinson Pear.—Since the description of this pear appeared in our pages, we have received the following note upon it, with specimens of the fruit, from J. M. Ives, of Salem, a gentleman well known to pomologists:—

"I observe in your last Magazine an account of the Wilkinson pear, which I consider one of the best, *if not* the best native pear we possess; but, in order to produce it as *per the sample sent*, requires a stronger and more retentive soil than the Belle Lucrative, Beurré Bosc, or Bloodgood. In my place at North Salem, grown upon a light sandy loam, this variety as well as the Lewis were generally small, and exceedingly variable in size, &c. The within pears have always grown of this size in the stronger loam at my garden in the city.—*Yours*, J. M. Ives, *Salem, October* 14, 1854."

The Lewis Pear.—We are glad to see this fine old native variety attracting more attention. Well cultivated, it is a fine winter pear, nearly or quite equal to the Winter Nelis. Mr. Ives informs us that "not one fruit in twenty of the Lewis that he has heretofore grown on Dearborn street, Salem, would ripen well—but in his garden in the city, on the same tree with the Wilkinson, they are all fine, and of good size." It is late in coming into bearing, and our young trees heretofore have produced such "buttons" of fruit that we thought very little of it. This season the crop was light, and the specimens full as large as the Nelis or Lawrence; they are now beginning to ripen, and are truly delicious. As we have hinted before, pear trees, particularly some sorts, must have age before they show their true characteristics.

PERPETUAL STRAWBERRIES.—Two or three years since, Mr. Peabody, of Columbus, Ga., succeeded in raising Hovey's Seedling strawberries from spring till fall, and his success was attributed to his peculiar mode of culture, an account of which he published in the *Soil of the South*, of which he is one of the Editors. But it appears that in California our Boston Pine is as perpetual there, without any particular culture, as the Seedling is in Georgia. Our correspondent, Mr. Osborn, of San José, writes us under date of September 20th, that a lot of Boston Pine plants sent him by Messrs. Hovey & Co., last December, "are now and have been in full bearing." The *California Farmer* also states that "several bowls of superb Boston Pine strawberries were exhibited at their office, Oct. 5th, from J. L. Sanford, Shell Mound, Alameda Co." Presuming the first fruit would ripen in April, this would give full six months for the strawberry season. No cultivation, without the aid of such a climate as that of Georgia or California, would make the Boston Pine and Hovey's Seedling, perpetual bearers.

THE GRAHAM GRAPE.—This new variety was exhibited at the late session of the American Pomological Society in our city, and we regret that we did not have an opportunity to taste it, being absent when the Committee were examining the fruit. It is well spoken of, and may prove a valuable variety.

BRITISH POMOLOGICAL SOCIETY.—A new association under this name has recently been formed in London, for the promotion of Pomological Science in Great Britain. The first meeting was held in Regent street, July 10th, when Mr. Rivers (nurseryman,) was called to the chair. The following resolution was carried unanimously:—

"That the society shall have for its objects the promotion generally of fruit culture in the British dominions. That it shall especially direct attention to the production of new varieties of fruits, examining and reporting on their merits, and endeavoring to Classify the Fruits of Great Britain, the European Continent and America."

It was then proposed, and carried unanimously, that SIR JOS. PAXTON, Knt., shall be President of the Society.

Robert Stanbury, H. B. Ker, and Thos. Ingram, Esqrs. Vice Presidents.

Mr. John Spencer, Secretary and Treasurer.

Mr. T. Rivers, R. Hogg, G. W. Johnson, G. McEwen, J. B. Whiting, Mr. Powell, Chas. Turner, J. Edwards, Mr. Moore, Mr. Thompson, Mr. Malleson, Mr. Davidson and Mr. Lowe, Committee of Management.

The Society embraces a wide field, "Great Britain, the European Continent, and America." We welcome its formation as a great aid in the dissemination of Pomological knowledge, but we would suggest that the classification of the European fruits is sufficient to begin with, and if one generation of the members accomplish this satisfactorily, then they may take up the American fruits. With all due deference, however, to the good intentions of our transatlantic cultivators, we suspect American Pomological writers will have a larger part of the European fruits, worth having, not only classified, but described, accurately figured, and the choicest of them beautifully drawn and colored, before this new Society gets well under way.

THE PHILADELPHIA PEAR.—This new native variety, which has been known around Philadelphia as the Latch pear, is described by Dr. Brincklé in the *Horticulturist*, under the above name. A single specimen was exhibited at the late meeting of the American Pomological Society in Boston, but we accidentally overlooked it. When well cultivated it attains the size of the Bartlett, Dr. Brincklé's best specimen weighing *eleven* ounces. It is of roundish, ovate form, yellowish skin, with a long stem. "Flesh, not of the finest texture, but moderately fine, yellowish white, buttery. Flavor, saccharine, perfumed, delicious." Ripe in September.

The tree originated in Frankford, Pa., in 1832. It began to bear in 1840, and has continued to bear regularly ever since.

New English Strawberries.—Quite an accession has recently been made to the varieties of strawberries in cultivation in England. No less than five new sorts are advertised for sale; their names are as follows:—Omar Pacha, Sir Charles Napier, Nimrod, Sir Harry, Admiral Dundas, (Myatt's,) Scarlet Nonpareil, and Magnum Bonum. These are all announced as very superior strawberries, and some of them larger than the British Queen. We shall notice them again, when they have had further trial.

Supplementary Fruit Catalogue of the London Horticultural Society.—A small pamphlet of 28 pages was published in August, 1853, giving a list of all the new fruits proved in the Society's garden since the publication of the third edition in 1842, together with such additional synonyms as have been discovered. It is stated in the prefatory remarks that the "materials for this Supplement have been limited in consequence of unfavorable springs." And on this account some of the best pomologists thought it not desirable to attempt publishing one till a good fruit season should occur: but the council of the Society thought otherwise, and accordingly this Supplement was prepared. We think if Mr. Thompson's advice had been followed it would have been more creditable to the Society; for certainly a more meagre show of proved varieties, in a period of *eleven* years, was never made by any similar association, having the same means at their command. The whole additional varieties which have been proved in the garden is not over *thirty.* Such kinds as Fondante de Noel, Belle Epine Dumas, Beurré Clairgeau, Bonne des Zees, Doyenné Boussock, &c., which are, apparently, old with us, are quite unknown in the Society's Collection, only from their reputed character, (marked R. C.) Other familiar varieties with us, such as Beurré Superfin, Grand Soliel, Nouveau Poiteau, &c., are only named, without any description or remark that the fruit is even known. We think our American pomologists may safely say, after studying this Supplement, that we have done more in the *eleven years* past, in proving, identifying, and describing foreign pears, than the Horticultural Society of London since they published their second Catalogue in 1832. Only *three* cherries are added to the list since 1842.

THE OSWEGO BEURRE′ PEAR.—This very fine variety does not receive the attention it deserves. We suspect it will prove one of the most popular kinds, ripening as it does at a good season, and keeping well. The owner of the original tree writes us that this year it produced *twenty* bushels of fruit. It is as high flavored as Gansell's Bergamot, and about the same size.

AMERICAN TACT FOR FRUITS, AND THE PROGRESS OF POMOLOGICAL KNOWLEDGE IN ENGLAND.—We have above given some account of the formation of a new English Pomological Society. That there is abundant need of such an Association is apparent to every reader of the English Gardening papers. Witness the following from the *Gardeners' Chronicle*, edited by Dr. Lindley, in reply to a correspondent:—

"Blackberries.—We do not know what is meant by the New Rochelle Blackberry. Many kinds of Rubus inhabit the United States, and are *said* to be good for table; but they have never yet found favor in Europe, where men's tastes are more refined (!) than in the New World."

This accounts for the Concord grape being considered "only fit for jellies," by some of our grape cultivators. But, seriously, how will the new Pomological Society ever be able to classify our American fruits if the members show such lamentable ignorance of them as is contained in the above paragraph? Mr. Rivers very truly remarks, in the *Horticulturist*, that he thinks it very probable they will not be able to carry out this idea, solely, he believes, from a "sort of John-Bullish selfsufficiency, which, as has happened in other matters, I trust will be cured by your activity in shaming us into a like course." Mr. Rivers is about the only nurseryman in England who has thought our best American fruits worthy of introduction. We have no doubt his good judgment and energy in this, as in other things, will bring him an ample reward.

American Pomological Society.—The report of the third session of this Society, held in Boston in September last, has not yet been issued, and we have not therefore been able to give a correct account of what was done. A very imperfect newspaper report has been extensively copied into various agricultural papers, but so incomplete, that we could not offer it to our readers, preferring to wait a little, and have the authentic report itself. It is to be regretted that it is not issued more promptly, in order that it might supersede the necessity of relying upon such hasty and erroneous reports as have already appeared.

To show the importance of correct and truthful reports, we annex the following discussion on the Boston Pear; giving the report as it has appeared in various journals, and the remarks as they were actually made:—

"*Boston Pear.*—Mr. Cabot gave his experience of it, but no opinion. When he first tasted it, he thought it as good as the Golden Beurré of Bilboa; at other times he had seen it when he would not have known it."—(Report in *Boston Courier* and other journals.)

Mr. Cabot's remarks were substantially as follows:—

"The first time I tasted it, I thought it *first rate*, strongly resembling the Golden Beurré of Bilboa in form, with red in the sun; that the two succeeding years specimens I tasted were indifferent in quality, and seemed to vary greatly in appearance from those first seen; that the fruit the present year was as good as when I first saw it, and was very excellent; that its inferiority in the two years above mentioned has been accounted for by ascribing it to the fact that the specimens grew on young trees in the nursery rows; that the Boston pear *this* year was a better pear, without at all resembling it, than the Tyson, taking this last as a standard."—(From Mr. Cabot's *Manuscript* copy.)

Every reader can make his own comments, and judge from this, of the accuracy of the reports which have been published as the proceedings of the Pomological Society.

ART. V. *Floricultural and Botanical Notices of New and Beautiful Plants, figured in Foreign Periodicals; with descriptions of those introduced to, or originated in, American Collections.*

LOPEZIA MACROPHYLLA.—This new and fuchsia-like plant, recently noticed under this head, is now in bloom in our collection, and proves a very fine addition to our late autumnal greenhouse plants. It attains about the height of three feet, with foliage similar to some of the broad-leaved fuchsias, and with terminal heads of deep rosy crimson blossoms. It appears to be of easy cultivation and flowers freely in a moderately warm house.

NEW POMPONE CHRYSANTHEMUMS.—The perfection to which this beautiful flower has been brought by the French and Belgian florists, would seem almost to defy further improvement; but perfection, after all, in any flower is a great way off, at least so it appears with the chrysanthemum. Some of the new kinds of the last year have been superbly in flower, and among them a few of the most remarkable beauty: two Yellow in particular, Nonsuch and Stella; the latter with the edges of the petals so nicely cut that the flower has the appearance of being deeply fringed. Mad. de Vatry and several others are also beautiful and distinct varieties.

256. FRANCI'SCA EXI'MIA *Scheid.* BEAUTIFUL FRANCISCA. (Schrophulariàceæ.) Brazil.

A hothouse shrub; growing two feet high; with lilac flowers; appearing in March; increased by cuttings; grown in leaf mould and sand. Bot. Reg., 1854, pl. 4790.

A beautiful and free flowering species of the Francisca, with broad lanceolate, sub-coriaceous, opaque leaves, and terminal clusters of four or five flowers of purplish lilac, fading to white. It was introduced to Brussels by M. de Jonghe, and more recently into British collections. (*Bot. Mag.*, June.)

257. GARDE'NIA GLOBO'SA *Hockstett.* GLOBE-FRUITED GARDENIA. (Rubiàceæ.) Natal.

A greenhouse plant; growing two feet; with white flowers; appearing in summer; increased by cuttings; grown in light rich soil. Bot. Mag., 1854, pl. 4791.

This pretty species of the Gardenia is from Natal, South Africa. It is a greenhouse shrub, much branched, with opposite, coriaceous leaves, and terminal white flowers, bell-shaped, and very fragrant. It will be a fine addition to the gardenias, as it flowers freely in the greenhouse. (*Bot. Reg.*, July.)

258. Bu'ddlea cri'spa *Benth.* Crisped-leaved Buddlea. (Schrophulariáceæ.) Himalaya.

A half hardy shrub; growing ten feet high; with lilac and white flowers; appearing in spring; increased by layers and cuttings; grown on any good soil. Bot. Mag., 1854, pl. 4793.

Raised from seed, sent from Western Himalaya, where it was found at an elevation of 5500 to 7500 feet above the level of the sea. In England it proves a very desirable shrub, growing and flourishing freely with the protection of a wall; and flowering there "from the beginning of February until the beginning of May, scenting the atmosphere around with its fragrance." The flowers are arranged in dense spikes, which from their number form panicles, and are of a lilac shade with a white eye. Undoubtedly it will stand our winters south of Philadelphia, where it would be a fine addition to our collections. (*Bot. Mag.*, July.)

259. Cle'matis barbella'ta *Edgeworth.* Beard-letted Travellers' Joy. (Ranunculàceæ.) Western Himalaya.

A climbing plant; growing ten feet high; with purple flowers; appearing in spring; increased by seeds and layers; grown in any good rich soil. Bot. Mag., 1854, pl. 4794.

A handsome Himalaya species, found at an elevation of 10,000 feet, and probably hardy in our climate, as it has proved so in that of Great Britain. In habit it resembles the C. montana, and flowers at the same time. It has large chocolate colored flowers, with cream colored borders to the sepals, and contrasts prettily with other species. It is a free bloomer. (*Bot. Mag.*, July.)

260. Cassiope fastigia'ta *Don.* Fastigiated Cassiope. (Ericàceæ.) Himalaya.

A hardy shrub; growing two feet high; with white flowers; appearing in spring; increased by layers and seeds; grown in heath soil. Bot. Mag., 1854, pl. 4796.

"In general habit this charming plant has much affinity with Cassiope (Andromeda) tetragòna of Arctic Europe and America; but it is a larger plant, far more beautiful, and has leaves of quite a different and peculiar structure, having a white, silvery, finely contracted margin, and a deep and broad keel furrowed on the back." It was found at an elevation of 13,000 feet, and we think will prove entirely hardy in our latitude, though this remains to be proved. It is beautiful enough to demand speedy introduction. (*Bot. Mag.*, July.)

261. SPIRÆ'A GRANDFLO'RA *Hooker.* LARGE FLOWERED SPIRÆA. (Rosàceæ.) China.

A hardy shrub; growing four feet high; with white flowers; appearing in spring; increased by layers; grown in any light rich soil. Bot. Mag., 1854, pl. 4795.

This is one of the later acquisitions of Mr. Fortune in his wanderings in China, and will rank with the Weigèlia among elegant shrubs. It is the only large flowered species that has been introduced; the blossoms being as large as the Syringa. The habit and foliage are those of an Amelanchier, to which genus Mr. Fortune referred it, calling it A. racemòsa. It is a remarkable species and extremely different from any hitherto described. The flowers are white, and appear in terminal racemes, bearing six or eight large conspicuous white flowers. It will undoubtedly prove as hardy as the Weigèlia. (*Bot. Mag.*, July.)

262. RHODODE'NDRON CITRI'NUM *Hasskarl.* CITRON-FLOWERED RHODODENDRON. (Ericàceæ.) Java.

A greenhouse shrub; growing two feet high; with yellowish flowers; appearing in spring; increased by layers and seeds; grown in heath soil. Bot. Mag., 1854, pl. 4797.

A charming greenhouse shrub with evergreen leaves two inches long, resembling those of a Kalmia, and small, campanulate pale yellow flowers. It was found in the mountains of Java, at an elevation of 9700 feet, where it inhabits the trunks of old trees. Its delicate foliage, beautiful yellow flowers and dwarf habit class it with the Azalea as a greenhouse plant. It must be considered a great acquisition, as most of the Rhododendrons are such huge growers, that they occupy too much space for indoor cultivation. (*Bot. Mag.*, Aug.)

REVIEWS.

Art. I. *A Complete Manual for the Cultivation of the Strawberry, with a description of the best varieties; also, Notices of the Raspberry, Blackberry, Currant, Gooseberry, and Grape; with Directions for their Cultivation, and the Selection of the best Varieties.* By R. G. Pardee. 1 vol. 12mo, 144 pages. New York: 1854.

This small manual on the culture of the strawberry, &c., by Mr. Pardee, was overlooked in the reviews in our last No. It appears to be a good work for those who need information on the growth of the strawberry in a limited way; it is written in a plain, familiar style, and contains the author's own experience, though the views of other cultivators are added in an appendix.

The culture of the strawberry is one of the most simple operations in gardening: every body can raise a good crop; but all cannot raise large specimens. The object of the author is to show how the latter can be done in a successful manner; and he goes into the usual details of Situation, Soil, Manures, Watering, Mulching, Winter Protection, Renewing the Beds, &c. Each subject has a chapter devoted to it, the whole concluding with a descriptive list of the best kinds.

Mr. Pardee does not recommend the use of barn-yard manures for the strawberry. He thinks finer fruit can be raised without it. In its place he would use "leaf-mould, decomposed turf or peat, muck, ashes, lime, &c.," and he thinks that "few good soils need enriching at all for the strawberry." This may be true, but so far as our experience goes—the experience of twenty-five years—we are sure that fine fruit of the largest size cannot be abundantly raised without a good soil well manured. The objection to manures, because they stimulate the vines, is founded in error; error resulting from the practice of applying manures according to the analysis of the dead plants. There can be no fine fruit when there is not a good growth of the vine, any more than there can be wood made in a fruit tree without leaves. The whole premises are wrong; and whoever attempts to raise fine strawberries without manure, (or its equivalent, guano,) will signally fail. Mr. Pardee recommends a solution of glauber salts, potash, soda, &c., to be applied to the plants every ten days or so; this mixture may answer a very good purpose, but it savors too much of empiricism to find a place in a Treatise on this important subject.

The other directions upon the cultivation of the strawberry are valuable, and, with the above single exception, the volume is a useful work in the hands of all who are commencing the culture of this delicious fruit. The descriptions of the several varieties, though the author differs from us in his estimate of their value, are generally correct. The six kinds Mr. Pardee thinks the best, are Hovey's Seedling, Burr's New Pine, Munroe Scarlet, McAvoy's Superior, Longworth's Prolific, and Walker's Seedling. With the exception of the two first, however, the author has had but little experience, as they have been introduced since 1850 and 1851.

The remaining portion of the volume contains some useful hints on the smaller fruits. Among grapes the only two kinds noticed are the Isabella and Catawba. The Diana is probably unknown to the cultivators around New York.

MISCELLANEOUS INTELLIGENCE.

Art. I. *Foreign Notices.*

British Pomological Society.—This new Society held its first exhibition in London, Nov. 6th, when there was a very fine display of fruit. The following report we copy from the *Gardeners' Chronicle:*—

This new Society had an exhibition of fruit on this occasion, consisting chiefly of pears and apples, of which there were said to be about 2000 specimens. There were also a dish of grapes and some peaches. Specimens of a yellow peach, called the Apricot peach, raised from a stone brought from Italy, in 1844, by Col. Salway, attracted much attention. The sort from which it was raised is said to ripen in Italy the middle of October. The specimens exhibited were gathered from the seedling tree on a wall in

Col. Salway's garden on the 3d inst.; the flesh parted freely from the stone, and is of a deep orange color, juicy, and of an agreeable sweetness, with scarcely any of the prussic acid flavor so often prevalent in late peaches. Their smell was like that of a ripe apricot, and very powerful. This peach will doubtless prove a valuable acquisition if its flavor is always equal to that of the specimens exhibited. It was stated by Mr. Powell, of the Frogmore Gardens, that it was equally good last autumn, although the season was, as is well known, very cool and moist. Some specimens of a new late yellow Pavie or Clingstone peach from Bordeaux, called Pavie Genisaut, exhibited by Mr. Rivers, ripened in a house with gentle heat, were found to be dry and worthless. "Mountain" peaches from Holland, exhibited by Messrs. Webber, of Covent Garden, and said by them to have been sent to them *via* Hamburgh nearly a month ago, were too far gone to judge of their quality; they were freestones, and Mr. Webber said that both last year and this they had found them of great excellence, far exceeding the Catharine peach in goodness, and coming in about the same time. Messrs. Webber likewise exhibited some fine Chaumontel and other pears from Jersey. Among the pears, by far too numerous to particularize in this report, were some from G. Unthank, Esq., of Limerick; these seemed to show that the soft, humid climate of Ireland, more particularly that of the south, is as favorable as that of Jersey for the cultivation of pears. In Mr. Unthank's collection were a Beurré Rance, weighing 18 oz., Duchesse d'Angoulême, 17 oz., Old Colmar, 10 oz., Beurré Diel, 14 oz., Josephine de Malines, 7 oz., Susette de Bavay, 8 oz., and Easter Beurré, 13 oz. Fine specimens of Beurré Clairgeau were exhibited from the garden of W. Wells, Esq., of Redleaf. As this new pear is quite a "lion" in Belgium and France, and has been much talked of in this country, considerable interest was created in testing and tasting their quality—they were quite fit for the table, large and very beautiful, no pear, perhaps, equal to them in that respect, being on the sunny side of a fine clear pink, tinted with russet near the stalk, and in shape something like a large Beurré Bosc; their flesh was found to be tender and juicy, not buttery, and their flavor flat and watery, entitling it to be classed only as a second-rate variety; these specimens were gathered from a tree on a south-east wall; one specimen from a pyramid on a quince, from M. Langelier, of Jersey, was a shade better, but far, very far inferior to the Marie Louise. Some fine specimens of the new pear Beurré Nantais, not ripe, were sent with the Beurré Clairgeau from the garden of Mr. Wells; these were large, of a deep russet, and looked as if they would turn out well. A beautiful sort of quince from Syria was exhibited by Messrs. Veitch; the specimens were as large as the Portugal quince, not long, but more of the shape of the Crassane pear, and very smooth and regular, without any of the rugosities peculiar to the quince. Their flavor was found to be but middling—the quince flavor scarcely apparent. A very interesting collection of pears was sent from Yorkshire, from —— Fox, Esq.; the specimens were fine, and the nomenclature very correct. A seedling pear from the old autumn Bergamot was shown by Mr. Rivers; the specimens were larger than the parent variety, of the same shape, color and flavor, but too deficient in juice; this sort was brought principally with a view to show the hardiness of pears raised from seed in England. The frost of last April was reported to have destroyed all the blossoms of the pears growing near this seedling, even such hardy sorts as the Hessel, Williams' Bon Chrétien, and Beurré Capiaumont, and yet every blossom of this seedling Bergamot set its fruit. M. Langelier had a large collection of pears from Jersey. The finest flavored pears tasted in the course of the day, out of some hundreds, were Beurré Superfin (this generally ripens in September,) Fondante d'Automne, Thompson's, and Eyewood; the latter had a most perceptible touch of the pine-apple flavor. Of apples, there were some beautiful specimens of Ribstons, King of the Pippins, and other well-known kinds.

PROFITS OF PEAR-GROWING IN BELGIUM.—In a letter inserted in the *Gardeners' Chronicle*, p. 678, your correspondent, "H. T. H., Staplehurst," states that the produce of the pear tree is of less value than that of the small-fruit tree, and that he would feel obliged by receiving instructions which might be the means of increasing the produce of his pear trees. Your correspondent cannot be serious in his request. He should have made known the condition of the soil in which the trees are planted, the names of the varieties which he cultivates, probably shy bearers, their age, and system by which they are managed. Without information on these points it is impossible to give him a satisfactory answer. Nevertheless, I may say that if his trees are reared according to the system adopted near London, it would be impossible to give him advice on the subject with any prospect of success. In fact, in our opinion, the fruit trees there are too far gone, and, as it appears to me, they can never afford a produce proportionate to the expense incurred in their cultivation. The grounds on which this opinion is based have been already detailed in a previous communication, and therefore it is not necessary to go over them again.

It is upon the choice of the soil, or, it may be, in plantations of this kind, upon that of a variety sufficiently hardy and vigorous to succeed as a standard; and also upon the choice of a healthy and vigorous stock, reared upon good principles, and subjected to a proper system of pruning, the essential points of which were laid down in a communication last month, that the future success of a plantation of dwarf or tall pyramid pear trees depends.

In its youth, a pear tree is subjected to a careful and scientific mode of pruning, the object of which is to preserve the stem straight and upright, the branches at proper distances, and to form a good skeleton. When the tree has arrived at the age of bearing fruit, less pruning is required; and is then confined to regulating the distances of the branches along the stem, and cutting back the shoots to a good eye. These operations are neither difficult nor expensive when the workman is once accustomed to them. In a working day he may easily go over fifty trees.

With regard to the value of produce of a pyramid, treated according to these principles, we shall give an example (taken from among several trees.) The very vigorous and fruitful variety of pear tree, called Triomphe de Jodoigne, raised by the late M. Bouvier, a pupil of Van Mons, occupies in my garden a space of eight feet square. The tree is from eight to nine years old. For the first four years after planting, the pruning was conducted with the view of forming the branches of the pyramid; and after that period it was performed with the intention of bringing the young tree into a fruiting state.

The first fruits were produced to the number of 15, in 1853. This year the tree has borne 58 fruits, equal in size to the Catillac, but of a longer and more handsome form. In the beginning of May, I judged it advisable to remove from the tree upwards of 200 well-formed young fruits, in order that the remainder might attain their full degree of excellence.

After gathering them, in order to ascertain what this new fruit would fetch in the Brussels market, I gave 10 of the fruit, together with its name, to a fruiterer, who immediately found a purchaser for them at the rate of 50 centimes (about 4¾*d.*) a piece. Hence it appears, that a pyramid planted eight years, and occupying a space of not more than eight feet square, yields a produce, the value of which is upwards of 1*l.* sterling. Let us suppose that four pyramids occupy a space of 20 feet square, the rent of which, at the utmost, would not exceed 2*s.* a year; and after having been planted and well cultivated for 8 or 10 years, produce altogether 200 fruits, and sell to the fruiterer for 10 centimes (about 1*d.* each,) which is the lowest price for a good pear in the most favorable years; then this produce, of 20 feet square, would be worth about 1*l.*, which would be equal to 400*l.* per hectare (about 161*l.* per acre.) Truly, I know of no other product of the earth which will yield this sum.

It is, of course, understood that table fruits are not here sold by measure, or by the sack, like stewing or baking pears. To obtain the above result, the most hardy and productive varieties must be chosen, and trained according to the best principles.

Now, that neither your correspondent nor the reader may have any doubt respecting the truth of these statements, I take the liberty of saying that I might adduce the testimony of several celebrated horticulturists in your country, Messrs. Veitch and Son, G. Henderson, Standish, Rivers, Jun., my friends Booth of Hamburgh, Hartweg of Weimar, and many other visitors, who may perhaps read these lines.

In conclusion, I invite all English amateurs who may come to Brussels to spend an hour in visiting my gardens, where they will find proof as regards the application of the principles which have formed the subject of our communications. Judging from appearances, which are very fine, the results will be every year more conclusive. Besides, as the system has produced such good results in a climate and soil which much resemble those of England, it appears to me that a trial of it might be made at Staplehurst. If, after experiments made with care and perseverance, *H. T. H.* finds that my directions are bad, then he will have a right to say that they have been of no benefit to him.

Mr. *H. T. H.* cites 30 years' experience in the cultivation of fruit trees. In this respect I am his senior, for I planted my first trees more than 40 years ago. By the aid of the formulæ of science, which sum up the experience of ages past, and by reading constantly the phenomena of lovely and bounteous Nature, we get more and more enlightened as to the means of obtaining the greatest amount of her benefits. *De Jonghe, Rue des Visitandines, Brussels, October* 22.—(*Gard. Chron.*, 1854, p. 709.)

Art. II. *General Notices.*

Layering Carnations.—The operation of layering is one of some nicety, and consequently there are many who do not do it at all well. Much has been written about it; but it requires practice and patience to do it properly. The system generally followed, and the one which I find to answer best, is, after having provided an equal quantity of road dust and decayed leaves, or other vegetable soils, well mixed, and a quantity of pegs, either made of fern, or what is better leaden ones cast in a mould, I place my pot in a wheelbarrow or on a low table, and take my seat in front. I then, with a sharp knife, remove the lower leaves close to the stem, and shorten the ends of the others; but I am not fond of cutting away too much. When all the layers are trimmed some of the compost must be put on the pot; and, having selected the joint to cut through, I place my finger at the back, to keep it steady, and gently insert the point of my knife in the centre of the stem, pushing it gently forward with the edge downward till the blade is half through; I then give the handle a slight twist, and bring the blade out below the joint on the under side, thus forming a nice tongue. The nib is then cut back to a joint, and the piece of leaf stripped off, leaving a small bud at the bottom. It is then carefully pegged down in the fine soil which had been placed on the pot. Each layer is operated on in a similar manner. When all are down, they have a little more soil put on them, but they should by no means be buried deeply. It sometimes happens that there are shoots so high as not to be conveniently brought down to the same level as the others; when this is the case, a large piece of broken pot is placed within the rim, which holds up the soil, and makes a higher surface, in which they are layered; or sometimes they will be long enough to insert in small pots placed close to the stem. After having got all the shoots down and slightly covered with soil, I place smooth flat stones, about the size of a halfpenny, over the cut of each layer. This not only prevents the soil from being washed away from that particular part, but it very much accelerates the rooting; for if the weather is hot, and the soil in other parts of the pot dry, if you examine beneath these stones, a genial moisture will be perceived; yet the pebbles absorb heat, which they slowly give out, much to the benefit of the layers. I must here notice the operation of piping; and though the carnation is much more difficult to root than the pink, yet I have adopted it with tolerable success; the great matter is to do them early, for they require plenty of time. I insert them in a light soil, under a north-east wall, and having watered, to settle the soil about them, when perfectly dry, they are covered with a hand-glass. They sometimes require a slight shade, and I do not remove the glass till I see they are establishing themselves, unless any damp off; in that case they are taken away. Worms sometimes prove injurious, both to pipings and to layers. When that happens a little water, in which hot lime has been slaked, should be poured over their holes. The layers must be constantly watched, and soil added now and then, but it must be with a sparing hand. They may be watered most evenings in hot weather, but it should be with water which has been exposed to the action of the sun during the day; and but little other attention will be required till they are ready to take off. If seed has been saved it should remain in the pods till next spring; about the latter end of April it may be rubbed out, and sown in shallow pans, or on a bed, covering it slightly with soil. It may remain there till the plants are about three inches high, when they may be planted out on a moderately rich bed. It is well not to have them too strong the first winter; but the following spring the surface of the soil may be covered with a rich compost. As the seedlings spindle, the single ones should be removed, to give the others room; and should the raiser be fortunate enough to have one which strikes his fancy, he may layer it, and adopt the same means and precautions as I have before stated.—(*Gard. Chron.*, 1854, p. 583.)

ART. III. *Domestic Notices.*

OLD COLONY SWEET CORN.—The Editor of the *Granite Farmer*, who has given this superior corn a fair trial, pronounces in its favor as follows:—

"We have cultivated, the present season, three varieties, Stowell's Evergreen, Darling's Extra Early, and Old Colony. Of Darling's Extra Early we would say that it is a good variety, but not *extra* early at all, at least with us. Planted at the same time with the others, it is in eating at the same time. To be sure, we have this variety on the table first, because we planted it in our garden two weeks perhaps before the other kind. With us it is simply a good corn.

We planted Stowell's Evergreen Sweet as much for curiosity as anything. We wished to see if it would keep green forever. We had formed the opinion that it was *not* a first rate table corn, that it was large and coarse, with not a delicate flavor. But in this we have been happily disappointed. It is a prime table corn; its appearance is handsome, the ears are large with full deep grains. We tried it after having eaten several meals of Darling's extra early. It was unanimously pronounced the best corn; it was further said, by several who tried it, to be the best sweet corn they had ever eaten. We congratulated ourselves upon the acquisition, and vowed a spot in our garden to it ever after.

But we had not then tried the Old Colony Sweet. This we tried upon the strength of its being the "sweetest and best table corn ever cultivated," and it has fully borne out that reputation. We gave it a full trial. It was first cooked with some of the Evergreen Sweet. This latter was eaten first, and as it had come to be a favorite corn, it received its due meed of praise. But when the Old Colony came on in its turn, there was an unanimous exclamation of its superiority.

The test was a fair one and somewhat extended. No hasty conclusion was formed; ear after ear was tried, until all at the table were impressed with the fact that the Old Colony led the list. Still the trial has been adjourned from day to day, but with no changes in the result.

As a table corn, we give the palm without hesitation to the Old Colony. We shall try to save from the grinders, which are neither few nor slow, some seed with which we can supply our friends if desired."

Art. IV. *Massachusetts Horticultural Society.*

Saturday, Nov. 3, 1854.—An adjourned meeting of the Society was held to-day—the President in the chair.

The report on scraping trees coming up for discussion, Mr. Walker moved that it be recommitted to the same committee, and that two other members be added to that committee by the President; Messrs. Sleeper and B. V. French were appointed.

George W. Collamore, of Boston, and William Plummer, of Lexington, were elected members.

Adjourned one month to December 2.

December 2.—An adjourned meeting was held to-day—the President in the chair.

Seeds were presented from William Appleton for distribution.

Luke Wyman, of Cambridge, and Thomas Bond, of Brookline, were elected members.

Adjourned one week to December 9.

HORTICULTURAL OPERATIONS

FOR DECEMBER.

FRUIT DEPARTMENT.

After the long and continued drought of the latter part of summer and early part of autumn, have succeeded the usual liberal rains of cool November. A large portion of the month was cloudy, rainy, and dull, with easterly storms, and the ground has been pretty well saturated with moisture. Frosts have held off unusually late, and, with the exception of two days, when the thermometer fell to 15 degrees, the month was more than usually mild. Such continued good weather has been favorable for all kinds of work, and there can be little excuse for any one who has not improved the opportunity, and prepared for the colder weather of December. If, however, there is any work yet to be done, the earlier it is attended to the better. Heavy frosts may not occur until late in the month; but it is not safe to defer anything at this late season.

Grape Vines, in the early forced houses, will now begin to show signs of starting. Keep up only a moderate temperature at present, as there is danger at this season of forcing too rapidly. Have the border well protected, if not already done, for on this much of the success depends. Syringe the vines night and morning, until all the eyes are broken. Vines in the greenhouse and cold grapery may now be pruned, cleaned and prepared for starting as soon as the proper season arrives.

STRAWBERRY beds should be covered on the approach of cold, frosty nights.

RASPBERRIES should be protected, if not already done.

FRUIT TREES may be planted as long as the weather holds mild and the earth free from frost.

SCIONS may be cut now for spring grafting.

PEAR, APPLE and other tree seeds should be planted immediately.

PEACHES, FIGS, and other fruit trees, in pots, may be brought forward in good season by introducing a few of them into the warmest house. Prune, wash, and destroy all insects before they are brought into the house.

CURRANT and GOOSEBERRY bushes may be pruned now.

FLOWER DEPARTMENT.

The moderate weather of November has given ample time to secure everything properly for the winter; but if there are plants which are yet exposed in frames or pits, see that they are properly protected by double mats, as a sudden hard frost would do much injury.

As the Chrysanthemums are going out of bloom, and will soon be removed from the house, employ the first opportunity to rearrange and put it in fine order. Wash the foliage of the Camellias and Oranges, and clear the Azaleas of all loose and falling foliage. Remove the Oxalises and other things going out of flower, and supply their place with such as are coming into bloom.

CAMELLIAS begin to open their flowers abundantly; syringe the plants occasionally, and keep the soil liberally watered. Cuttings may be put in now.

PELARGONIUMS will now need a good shift into larger pots; top and tie out the branches carefully, and place the plants in a light, airy place, as near the glass as possible.

GLADIOLUS, of the tender sorts, should now be repotted.

AZALEAS should be rather sparingly watered.

HEATHS, growing freely, should be shifted into larger pots: now is a good time to put in cuttings.

CYCLAMENS may have a shift into larger pots, if the roots are large and strong.

JAPAN LILIES, for blooming in pots, should be kept in a cool frame, protected from severe frosts.

VERBENAS, growing freely, should have larger pots.

ROSES, taken up out of the ground in October, should now be pruned and brought into a warm part of the greenhouse. Now is a good time to put in cuttings.

ALSTROMÆRIAS should be repotted.

MONTHLY CARNATIONS, growing freely, should be repotted as soon as they fill the pots with roots.

CACTUSES should be sparingly watered now.

ACACIAS, now coming into bloom, should be liberally watered.

HYACINTHS for blooming in winter should now be potted and plunged in sand in a cool frame or dry place in the open ground.

HELIOTROPES should be liberally watered now.